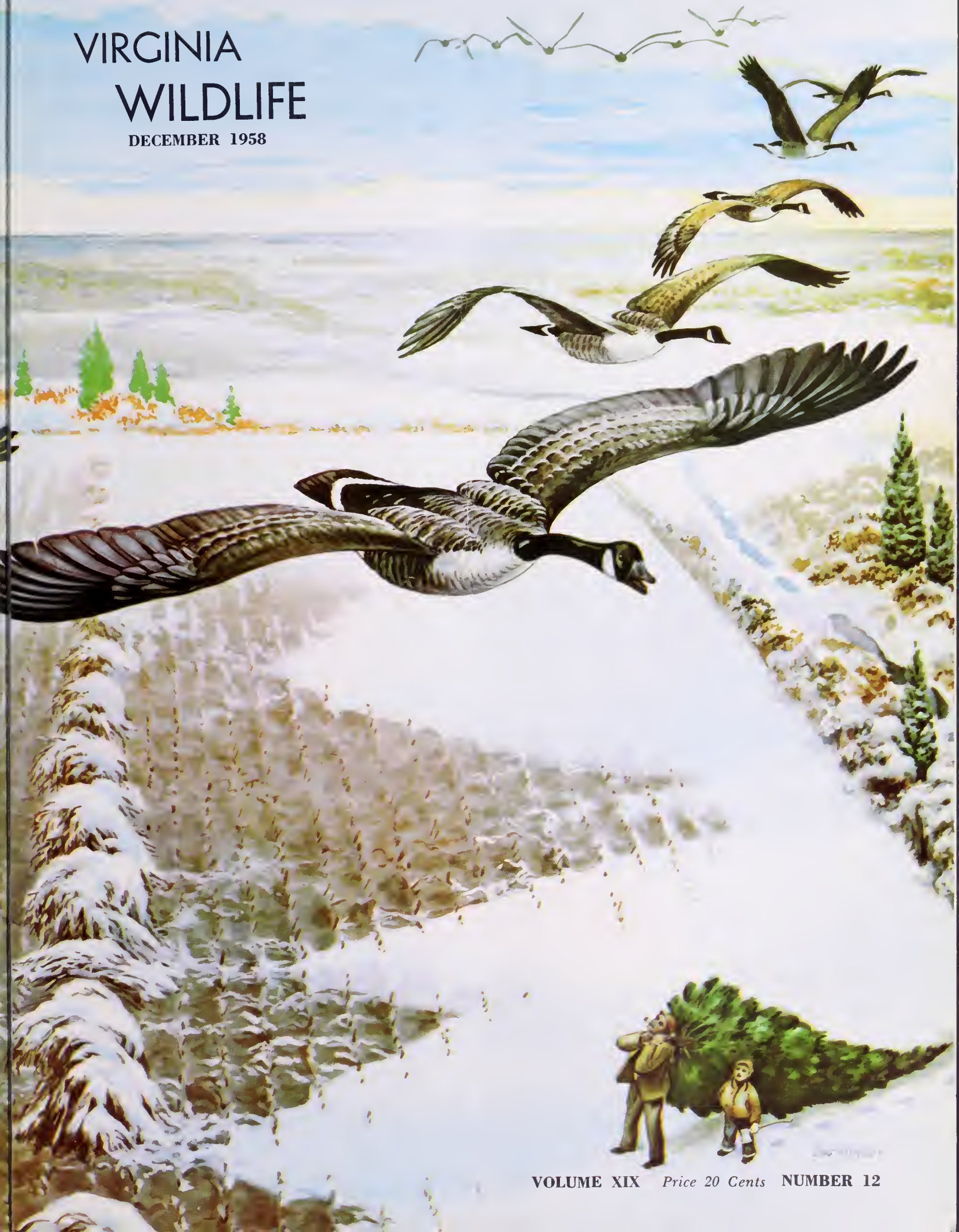
# VIRGINIA WILDLIFE

DECEMBER 1958



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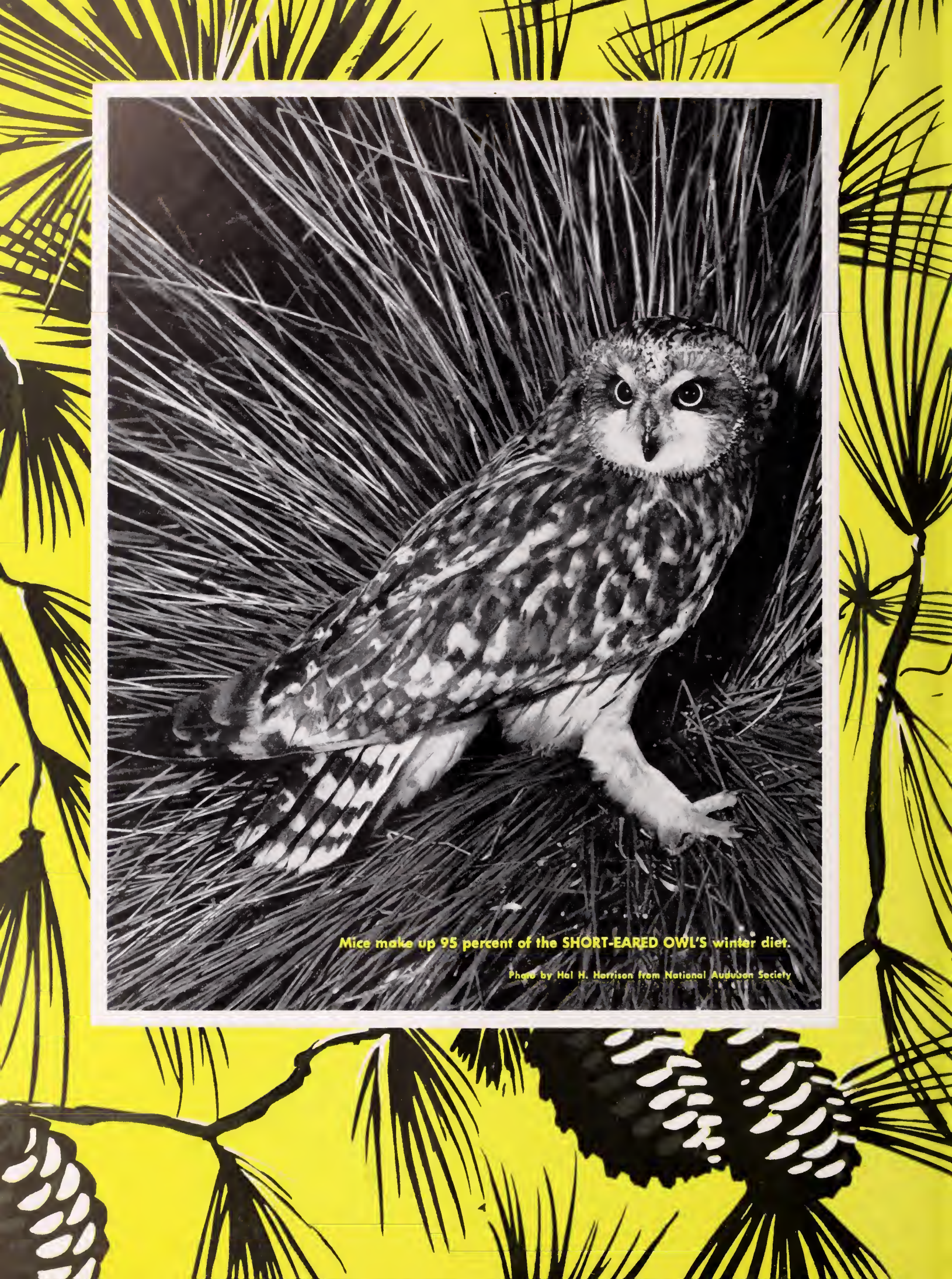

Mice make up 95 percent of the SHORT-EARED OWL'S winter diet.

Photo by Hal H. Harrison from National Audubon Society

# VIRGINIA WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia

***A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting, Fishing and Outdoor Recreation in Virginia***

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***In This Special Christmas Issue***

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***Our Christmas Cover***

Our cover this month depicts a flock of Canada geese low over a father and son homeward bound with a Christmas tree.

Painting by Bob Hines of Washington, D. C.

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# MERRY CHRISTMAS

and thanks to you, the 600,000 sportsmen of Virginia, for another year of outstanding support. Your game commission appreciated both your expressions of opinion for its guidance and the money you have contributed through purchase of hunting and fishing licenses for the financing of the Commission's activities. Three percent of the approximately 70 million dollars you spent this year for sporting equipment and hunting and fishing trip expenditures—a small percent but still a good-sized sum—came our way in the form of license sales income and made the Commission's work possible. Here, now, is our report to you, the "stockholders"—a breakdown of the Commission's receipts and disbursements for the fiscal year ending June 30, 1958:

| RECEIPTS | | | DISBURSEMENTS | | |
|---|---|---|---|---|---|
| County Hunting and Fishing Licenses | $ 225,786.00 | (11%) | Administration (including office building upkeep) | $ 61,283.65 | ( 3%) |
| Hunting Licenses | 848,823.10 | (41%) | Fiscal Division | 42,037.99 | ( 2%) |
| Fishing Licenses | 493,723.25 | (23%) | Education Division | 142,720.89 | ( 7%) |
| Trapping Licenses | 3,660.50 | ( 1%) | Law Enforcement Division | 838,210.21 | (39%) |
| National Forest Stamps | 83,409.00 | ( 4%) | Game Division | 561,623.29 | (26%) |
| Dog Licenses | 115,298.77 | ( 5%) | Fish Division | 324,574.11 | (15%) |
| Federal Aid | 245,612.00 | (12%) | Capital Outlay | 179,331.14 | ( 8%) |
| Miscellaneous | 53,539.10 | ( 3%) | | | |
| Totals | $2,069,752.62 | | | $2,149,781.28 | |

It could be pointed out here that you are entitled to quite a bit of game in return for the few dollars you spend each year on hunting and fishing licenses. The numbers of wild birds, animals and fish these licenses give you the legal authority to take would keep your freezer full the year 'round. But your Commission would rather you look upon the opportunity to go after this game as a privilege, and consider the license fee as your contribution toward the maintenance of the game supply. Our aim is to provide the lure which will get men and women out from in front of their TV sets and into the field, to re-create themselves through the healthful sports of hunting and fishing.

M.R.C.

# *On the Atlantic Flyway, destruction of wetlands is causing a*

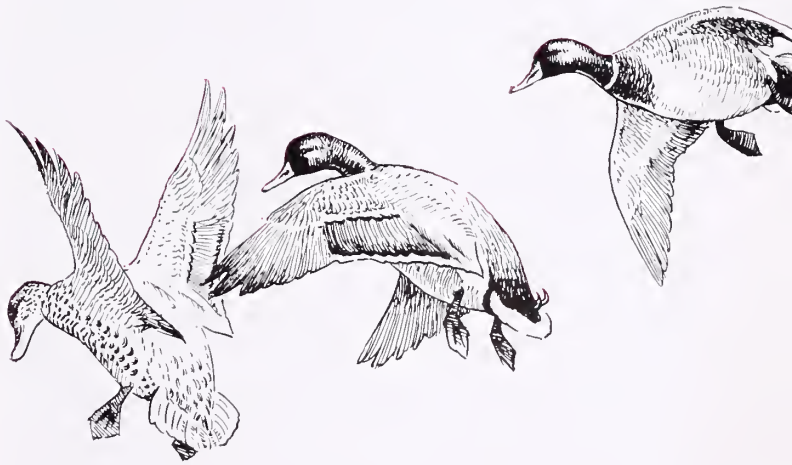
# WATERFOWL CRISIS!

By PHILIP BARSKE
*Field Representative, Wildlife Management Institute*

FOR untold generations, autumnal flights of waterfowl have stirred and awakened the souls of men. But does this emotional reaction mean that man is using his wetland resources so that future generations will also be able to experience the awakening of a hazy marsh and thrill to wings overhead?

Looking ahead only 17 years to 1975, it is estimated that the population of America will be 227 million, 60 million more than at present. This expanded population will have to be fed, housed, clothed, educated, provided with transportation and, last but not least, they will demand many forms of recreation including waterfowling.

The American's love of the out-of-doors is not decreasing for, even as we build larger cities, people are demanding more opportunity for outdoor recreation. National surveys indicate that more than 25 million Americans over 12 years of age hunt or fish or do both. These figures are for a 1956 population of 165 million people; what a 1975 population of 227 million will mean in terms of hunting and fishing pressure can only be conjectured.



In 1934, when duck stamps were first tried as a means of obtaining waterfowl restoration funds, about 635,000 stamps were sold. In 1957, about 2,300,000 duck stamps were sold. Simply stated, our waterfowl gunning pressure is increasing rapidly while our waterfowl habitat is decreasing rapidly—a situation resembling a man astride two fiery steeds that are galloping off in opposite directions.

If Americans maintain their present reproductive rate, there will be about 13 million more people in the upper half of the Atlantic Flyway and 15 million more people in the lower half of the Atlantic Flyway by 1975—a total of 28 million *more* people in the Atlantic Flyway competing for food, land, water and recreational space! Many of these new citizens of the East will be waterfowlers. This population rise and gunning pressure increase will mean, among other things, increased competition among many interests for the available wetlands.

Marsh lands are a source of great natural wealth. Annual cash values of marsh and wetland products run into many millions of dollars, and the value of wetlands as recreational grounds is immeasurable. Marshes are one of the richest sources of basic animal life that exist in any natural community. Increasingly, coastal marshes and estuaries are being recognized as key units in the life cycle of our coastal wildlife resources. Very recently, strong statements emphasizing the extreme importance of healthy coastal marshes to the welfare of fish life have come from the Virginia Fisheries Laboratory; commercial fishing interests have suddenly realized that the future of certain commercial fisheries depends on adequate and healthy coastal marsh lands.

Coastal marshes make up our greatest continuous acreages of wetlands. Much of the total marsh acreage along the Atlantic coast has already been destroyed as waterfowl habitat, and preservation of the waterfowl of the Atlantic Flyway will be possible only if steps are taken soon to protect and restore key units of the remaining natural coastal wetlands.

Since waterfowl are interstate travelers, they are basically subject to federal regulations. It has been the duty of the U. S. Fish and Wildlife Service to set the waterfowl hunting regulations including bag limits and open seasons each year. For all too long a period, many states felt that the waterfowl resource was a problem of the federal government's and consequently gave little attention to this resource. Within the past 10 years, however, there has been a vigorous awakening in the states, and now a cooperative attitude exists on waterfowl problems. Administrators and technicians from the Canadian and American federal services, the state agencies and the private conservation groups have formed the Atlantic Waterfowl Council to put the entire team to work on major problems and present a united front long needed in waterfowl and wetlands conservation.

Waterfowl, with their very special habitat requirements, are tied irrevocably to wetlands for food, shelter and breeding habitat. Wetlands such as those along the tidal estuaries of Virginia's many waterways are nationally famous as the wintering grounds of a gathering of waterfowl that funnel south from breeding grounds extending from the Seward Peninsula of Alaska to the northernmost shores of Newfoundland.

Federal services state that there are about 30 million acres of first-class waterfowl habitat still left in the U. S., and that, to perpetuate a supply of birds that will allow us to continue hunting them, we should have at least 12½ million acres of this wetland in public ownership. Federal ownership of about seven million acres and state control of about five million acres of wetland is recommended. At the present time the federal government controls about three million acres of good wetlands and the various states control about one and a half million acres of waterfowl habitat.

Waterfowl resting and wintering ground habitat is under continuous assault. Agriculture, industry, flood control, harbor projects, inter-coastal waterways, marinas, homesites, mosquito control, land-fills, pollution and a host of other interests are swallowing up the marshlands.

Scenic and esthetic values have always had a hard time competing with the last dollar connected with the reclamation of "waste land." Most of our nation's wetland is still privately owned and what a landowner does with his land is up to him. The modern viewpoint, however, is that an individual no longer has the right to impair the public interest by the mismanagement of a natural resource. Soil, water, plants and wildlife are resources of value to the general public, and, eventually, public concern and public legal procedures may step in and save local wetlands.

Waterfowl are capable of migrating long distances without stopping, and it is entirely possible that the destruction of one local marsh will do no great harm to the flyway population. The local marsh is highly important from the viewpoint of the local waterfowler, however, both for the gunning opportunity and for local bird production. Like the blood cells of our body, we can lose a certain quantity but beyond that we are in trouble.

Unless waterfowl are induced to make frequent stops on their journey south, hunting opportunity will be extremely limited in some localities. A major waterfowl refuge every 200 miles on the north-south axis of each flyway is said to be needed to perpetuate waterfowl, but it will mean sparse hunting for local areas if important wetlands between key federal refuges are wiped out. For proper waterfowl management and the opportunity for a fair harvest, a well-developed and maintained series of smaller wetlands is needed in every state.

Within each state the land-use pattern can save or destroy more game than all the state's wardens, biologists, and game managers can save or restore. Somehow, in each state, a decision must be made to save key wetland areas for posterity.

Most of the waterfowl of the Atlantic Flyway use private lands at one time or another. Therefore, the state and the individual landowner exert a great influence over the future of our waterfowl habitat. The simplest and most direct answer to the problem of how to acquire

wetlands would be to say, "Buy the lands that are needed!" Without a doubt, purchase of adequate wetlands by the federal or state government could assure preservation of enough wetlands to provide for future waterfowling and other uses but, unfortunately, this solution usually costs more than any state or group of citizens can afford. Outright purchase, however, still must be considered the number one method of saving wetlands.

The entire north and middle Atlantic coastline from Maine to Virginia may one day be one big urban sprawl of homes and factories. No single acre of wetland in this area will be safe unless set aside and dedicated. Marshes that appear to be safe by reason of remoteness or vastness are only a bulldozer, dredge or dragline away from oblivion. The time to save wetlands is while we still have them; delay will be disastrous and costly, for delay only permits more wetlands to be destroyed and the remaining lands to go up in price.

Within each state we generally have two strong conservation forces, the state fish and game agency and the organized public citizenry which may be in the form of a sportsmen's federation, the League of Women Voters or other group. Citizen groups are becoming aware of conservation needs and are seeking a cause to promote. Individually and group-wise there are many things that can be done on the wetlands conservation front. You and your organization can: (1) oppose ill-conceived and destructive projects; (2) accept, as an individual, your responsibility for protecting the remaining wetlands and other local resources; (3) encourage and establish local wetland projects; (4) alert your local conservation groups and state agencies when you learn of destructive or potentially destructive projects; and (5) make your vote a vote for conservation. Have local and state office seekers make a statement of their interest on conservation matters.

The average citizen is limited in the amount of time he can personally spend on conservation projects, but he still has a great opportunity to see that his state game commission is equipped by structure, laws, funds and personnel to do the needed job. The saving of key wetlands should be a part of the agency's over-all program.

The recent increase in the price of the duck stamp will provide additional funds to help round out federal wetland purchases, and several pieces of national legislation have been enacted or amended to require federal resource agencies to work together at the project planning state to enhance wildlife values at water development projects.

The Coordination Act now requires the Corps of Engineers and other federal construction agencies to submit their project proposals to the Fish and Wildlife Service and to the state conservation agency where large flood control, dam, river and harbor projects are being considered, to save and develop wetlands. In addition, the Federal soil bank and the Small Watershed Act both provide federal funds for wetland creation and preservation.

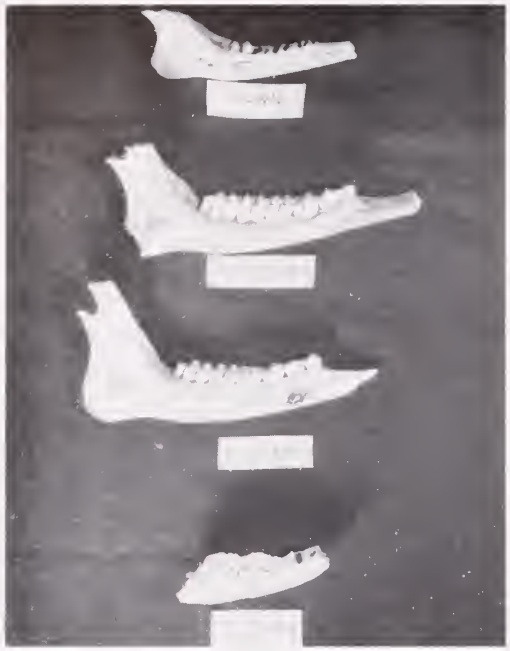
Many private individuals are interested either in donating lands for wetland management or in advice on how to develop their own wetlands. On public lands there is also an untapped source of wildlife habitat. There is opportunity to create ponds and wetlands under the accelerated federal highway program. In Delaware, a state highway had to cross the fringe of a marsh. By cooperative action of highway and fish and game departments, soil conservation district personnel and the local landowners, a highway has been built that now dikes a large portion of the marsh, and a water control structure instead of an open bridge allows for water level control, creating one of Delaware's most famous marshes.

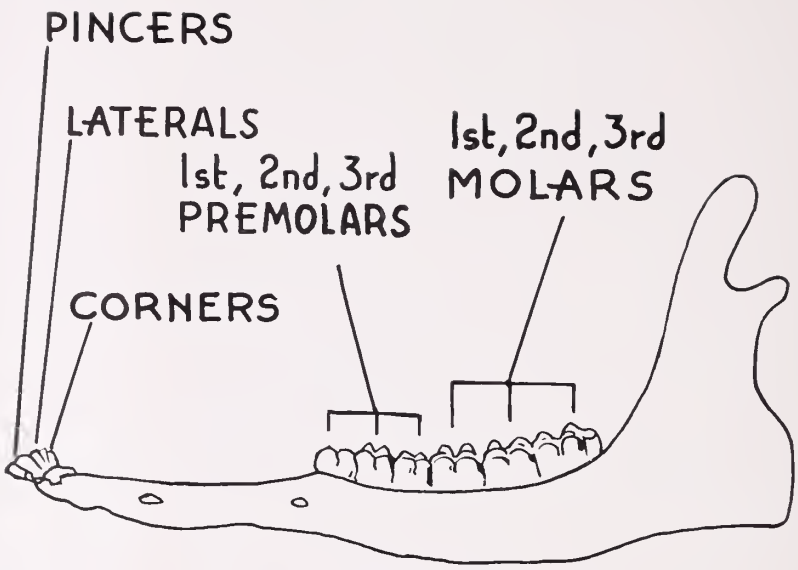
Coastal marshlands such as Hog Island State Waterfowl Refuge in Surry County and Saxis Waterfowl Management Area in Accomack County have been purchased by the Virginia Game Commission to preserve essential waterfowl and furbearer habitat.

Local zoning and planning is another community device that can be a conservation asset. In every community plans should be made to save key units of all types of natural habitat. In some areas, failure to properly zone an area has resulted in tremendous economic damage and loss of human life.

Thousands of acres of Atlantic Coast wetlands are now shrouded in glass and iron jackets of junked cars, beer bottles and tomato cans because local marshes were considered "waste land" and were used for town dumps.

Some wildlife lands must be lost to the march of progress, but much of our remaining wetland need not be sacrificed. We are beginning to realize that we cannot continue to destroy the most productive units of our landscape. We have an obligation to future generations of sportsmen, and only by the preservation and dedication of our remaining shallow-water areas can we perpetuate the sport of waterfowling.






At left, jaws of Indian-killed deer which have been aged and found to be fawn, 3.5, 6 and 7 years old when killed. Differences in tooth replacement and wear are obvious. At right is a diagram showing the different kinds of teeth in a deer jaw; pincers, laterals and corners are all incisors.

*Deer Jaws From Excavated Indian Sites Let Us*

# Compare Indian-Killed Deer With Modern Deer

By BURD S. McGINNES, *Leader*, and JOHN H. REEVES, JR., *Graduate Student*

*Virginia Cooperative Wildlife Research Unit, Blacksburg*

THE white-tailed deer was an important source of food and clothing to the eastern American Indian. Numerous antler and skeletal remains found in excavated Indian sites prove this.

Some of the early writers have stated that the hide of the deer was used by Indians in the manufacture of clothing, covering for their homes, and in the preparation of bracers and quivers. Whole hides were used as hunter camouflage. Hooves and tips of antler tines provided a glue used for attaching feathers and points to the arrows; gut and sinews were employed as bowstrings. Antler tines served as beads, tools for chipping stone implements, and a source of projectile tips and fish hooks.

The flesh of the deer was tasty and was consumed in great quantity; the bones were invariably split so that the nourishing marrow could be utilized. No part of the deer was wasted. The brains were used in tanning leather, and the stomach contents were sometimes the only food that could be retained by a starving man.

The Indian was an indiscriminate hunter, and he killed for food whenever he had an opportunity. Some people hold the false idea that the Indian killed only the very old or the very young of the larger animals, or that he killed the weak or sickened ones. In spite of his inefficient equipment, the Indian was an artful and successful hunter. Yet, faced with the problem of procuring food for survival, he undoubtedly killed game regardless of age, sex or condition.

To the authors' knowledge, a study of deer herds hunted by Indians has never been done. Fortunately, modern wildlife techniques provide a method whereby accurate age determination can be made on deer by teeth studies. This "Severinghaus technique," based upon tooth replacement and wear, can be used over a wide area of white-tail range today. Thus it would seem plausible that the technique could be applied to the pre-colonial deer herds.

A deer, like a cow, is without upper incisors, having only a dental pad in their place. However, the eastern white-tail deer is primarily a browsing animal whereas cattle are grazers. Deer subsist primarily on twigs, buds, acorns, and leaves of practically all native vegetation, and to a lesser extent on grasses. There are ten teeth on each side of the deer jaw: four incisors, three pre-molars, and

three molars. The pre-molars are replaced at 18 months of age; the molars are permanent teeth. The third deciduous ("baby-tooth") pre-molar has three points and is replaced by a two-pointed pre-molar. Beyond the age of one and a half years, abrasion or wear of the permanent teeth is the age indicator. This aging technique is widely used throughout white-tail deer range by modern game biologists.

Fawns are born in April, May and June and are one-half-year old during the November-December deer hunting season. The usual aging technique established to determine age of animals is on the half-year since this is the age when most specimens are available for examination (via the hunter's bag).

Information on the age of a deer herd thus obtained is used for proper deer herd management. Age composition may be interpreted to indicate rate of herd growth and also whether or not the herd is being properly harvested.

The Indians killed deer the year 'round, making it necessary for the authors to age deer killed throughout the year. For example, a specimen that falls between two and one-half and three and one-half years of age would be classified as a three year old deer, and it would be apparent that the deer was killed in the spring or summer.

Deer jaws were collected from prehistoric Indian refuse pits in Halifax and Giles Counties, Virginia. Those jaws which contained sufficient numbers of teeth were aged by the Severinghaus method. Thirteen useable jaws from Conner's Midden in Halifax County were loaned to the authors by the Archeological Museum of Virginia Military Institute, and six of the jaws were recovered from an Indian site on the property of T. M. Parcell in Giles County. The Giles County site, located on the banks of the New River, is believed to have been inhabited by the Moneton Tribe, while the Halifax County site, located on the Staunton River, was probably inhabited by the Saponi Tribe.

An age analysis of these deer jaws indicates a wide spread of age groups taken by the Indians. In a modern deer herd normally harvested, the greatest number of deer killed are fawns. There is a progressively diminishing proportion in the older age groups. Modern deer herds provide relatively few deer beyond five years of age because of the rapid turnover due to hunting. In other words, a deer today has small chances of living to be five years old.

In contrast, 37 percent of the Indian-killed deer jaws examined were five years of age or older. Admittedly, the sample analyzed was small, but obviously these Indians killed deer of all ages. They did not hunt only the young and those easiest killed. The second inference from this data is that the aboriginal deer herd was not thrifty or growing as is indicated by a lack of numerous individuals in the younger age groups so characteristic of an expanding herd.

Estimated age of deer jaws recovered from prehistoric Indian village sites:

| Age | Conner's Midden | Parcell Site | Total |
|---|---|---|---|
| Fawn | 2 | 0 | 2 |
| Less 1½ | 1 | 1 | 2 |
| 1½ | 1 | 0 | 1 |
| 2 | 2 | 0 | 2 |
| 2½ | 1 | 0 | 1 |
| Less 3 | 1 | 0 | 1 |
| 3 | 1 | 1 | 2 |
| 3½ | 0 | 0 | 0 |
| 4 | 0 | 1 | 1 |
| 4½ | 0 | 0 | 0 |
| 5 | 1 | 2 | 3 |
| 5½ | 0 | 1 | 1 |
| 6 | 2 | 0 | 2 |
| 6½ | 0 | 0 | 0 |
| 7 | 1 | 0 | 1 |
| Total | 13 | 6 | 19 |

These data appear to support the theory that deer are more numerous today than they were in prehistoric times. Early travelers tell us that the Virginia forests were composed of mature trees, with a definite absence of underbrush and shrubby plant growth, which is a main portion of deer diet. The lack of shrubby growth was caused by the small amount of light reaching the forest floor. The limited food supply was probably the factor restricting deer abundance. Modern logging operations, fires and agriculture have provided a wealth of low-growing vegetation ideally suited for deer welfare.

When more prehistoric deer jaws are analyzed, the result should be a clearer insight into the deer herds and hunting conditions upon which the Indian was so dependent.

## Deer Aging

**Sampson had nothing on the Unit boys**
**For they are now using his familiar toys.**
**The jawbone of an ass, his tool of fame;**
**The jawbone of a deer, their tool to more game.**

**Worn-out teeth tell the whitetail's age,**
**So they skillfully use this scientific gauge.**
**They study deer age, going out of their way**
**To see if management will really pay.**

**In the results a story is told**
**About the proportion of young to old.**
**They show in a glance the chance for next year,**
**The outlook for many or few whitetail deer.**

**—ROBERT H. GILES, JR.**
**Game Biologist**

# Trapping Bear Facts

Fairfax Settle uses a modified air rifle to shoot a hypodermic dart loaded with sedative into a trapped 79-pound yearling bear.

Text and photos by GEORGE H. HARRISON, *Educational Assistant*

EVER look down the throat of a live black bear? Well, Allen Stickley and his crew of bear trappers have—many times. In fact, they examined 28 live and healthy bears this past summer while the bears were sound asleep.

How many bears are there in Virginia? How long do they live? What do they eat? How far do they roam? How can we better manage the bears we have? These are some of the questions that Al Stickley and his helpers are trying to answer in order to preserve the bear population in Virginia in the face of increasing hunting pressure.

Very little is known about the bears in Virginia. The best way to get "bear facts" is to trap bears, tag and measure them, and then release them with the hope that they will either be trapped again later or weighed and measured at a state checking station if killed during the hunting season. The comparative information thus obtained will be of great value and should answer a lot of questions.

Al Stickley is the official bear trapper for the Virginia Commission of Game and Inland Fisheries. Last summer, Al had two crews of Virginia Polytechnic Institute students working with him in the Staunton area. One crew, which Al supervised himself, was on the North River and Dry River areas of the George Washington National Forest, north of Staunton. The other crew, supervised by John Clatterbaugh, a sophomore at V.P.I., was located on the Big Levels area of the George Washington, south of Staunton. The areas are in Augusta and Rockingham Counties.

The combined efforts of the two three-man crews produced 31 bears, including three recaptures. The use of a dart gun and a sleeping drug permitted the men to handle the bears.

How do you trap a bear and what do you do with him after you catch him? Here's how Al Stickley and his bear trappers trap and process a bear:

By searching for bear sign where the bears have climbed fruit trees and turned over logs and rocks, the boys get a good idea of where bears are active.

Then they set a bear trap, which takes a lot of "know-how" and care. (It may be easy to fool some animals, but a bear is as smart as they come.)

Stickley used two types of traps last summer. One, called a culvert trap, is a big round tube made from a Department of Highways road culvert, large enough for a bear to go inside and release the door. The culvert trap was not very successful because the bears were too wary to walk into something so big and obvious, whether they were hungry or not.

The other trap seemed to be just what the trappers needed. It is a large steel spring trap which catches the bear by the foot. In order not to hurt the bears, the trappers filed off the jaws and left an opening large enough not to break a bone, but small enough to retain the bear. Out of 31 bears caught, 20 were caught with the foot trap and only one leg bone, a couple of foot bones, and a few toes were broken. All of these injuries were caused by the bear thrashing around in the trap after being caught, not from the initial snap of the trap.

Of the 28 bears caught, 18 were males and 10 females. Average weight was 173 pounds for males, 132 pounds for females. One 400-pound bear caught August 25 had been tagged August 30, 1954, when it weighed 175 pounds. Another bear was caught three times during the summer.

There are several kinds of sets, the trail set where the trap is placed in the middle of a trail, the dirt hole set where the bait is placed in a hole and the trap at the entrance, and the cubby set. The latter set was used most often and was the most successful.

In order to make a cubby set, the trappers select a likely-looking tree or stump. Here they tie the bait, usually a large beef bone. On both sides of the set they pile up sticks and logs in order to form two walls, creating a funnel. In order for the bear to get the bait, he must go in the funnel. The trap is placed along the right wall of the funnel in order to catch the bear by the right front foot. The left front foot is measured during the processing.

Stickley knows that a bear will not step on small light sticks, so he puts sticks all around the trap, not on the trap. The trap, covered with leaves, makes a good place to step because there are no sticks there.

A yellow and black sign is posted over the trap to warn humans that the trap is set and that it should not be disturbed. A chest-high wire is stretched in a four-foot square around traps that are on or near a trail in order to keep people and deer from stepping into the trap.

The last thing done before leaving the trap is to drag a beef head in two directions approaching the trap so that all bears crossing the drag line will trail the scent right to the trap.

Now everything is ready; the rest is up to the bear. If he is hungry for beef and finds the set, chances are that the Game Commission will have another bear to study.

There were 13 traps set on the North River area and about the same number on Big Levels. Most of the traps were placed in very inaccessible spots and it took the crews most of the day to check all of the traps.

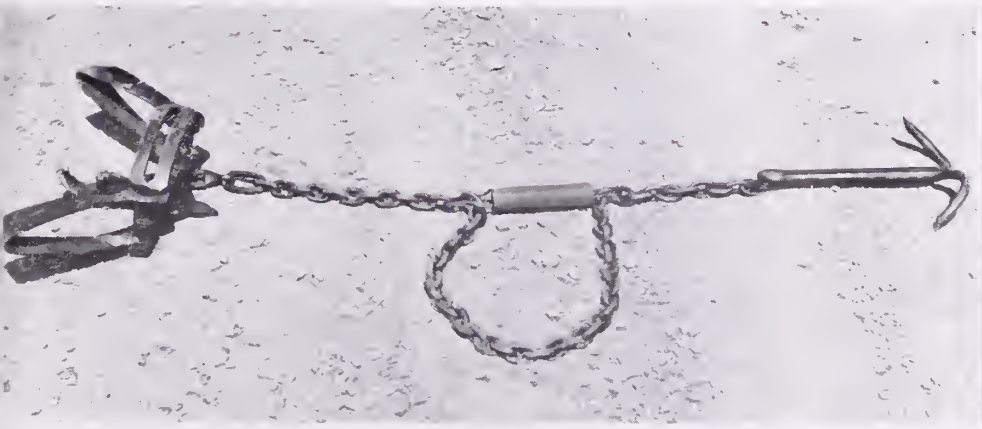
When a bear has been caught, it is rarely found at the site of the set. The steel trap has a chain and a drag hook attached. Nothing is anchored to the ground. When caught, the bear drags the trap until the hook catches on a tree or log and then the bear is fast. The chain has a heavy coil spring between the hook and the trap to keep the bear from breaking his leg when it thrashes around. There is enough give in the spring to keep it from snapping a bone.

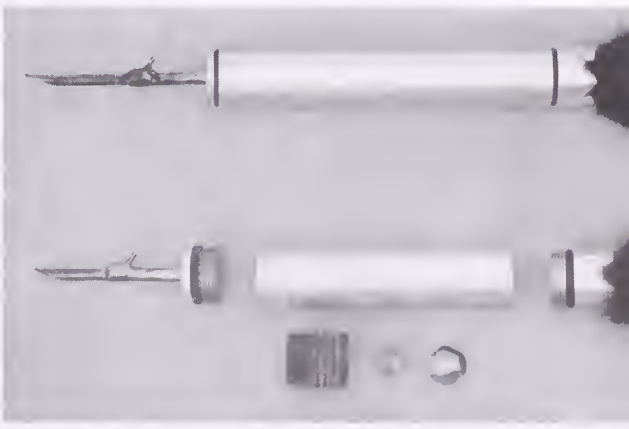
The bear is not often very far from the set, but one individual did succeed in dragging the trap a whole mile.

Stickley and his crew are very quiet when approaching a bear, which may injure itself if excited.

The first job is to estimate the weight of the bear, in order to decide the amount of drug to give it. A live bear in a trap is nothing to fool with, and the boys have to be very careful. The use of a dart gun is what made the project a success. A five-inch dart loaded with a tranquilizing drug called nembutal is fired into the bear at close range (10 to 15 yards) with a compressed air rifle. When the dart hits the bear in the abdomen, the jolt of the strike sets off a gas capsule forcing a rubber plunger forward and causing the injection of the drug. A very concentrated solution of nembutal is used and it usually takes only about one and one-half minutes for the total dose to be injected. The bear gets drowsy and finally falls into a deep sleep. A well-placed shot will put the bear out in five to twenty minutes, and the bear will remain asleep for about six or seven hours.

A steel trap with chain and drag hook (left) was used to catch 20 of the 31 bears caught. Darts loaded with nembutal (right) were shot into the bears to put them to sleep temporarily. Above is the complete hypodermic syringe, needle and stabilizing skirt; below is the disassembled dart, showing rubber plunger, gas pill and stopper.





Before doing another thing, the boys put metal tags with numbers on each ear. This is the identifying tag, and if the bear wakes up early, at least it can be identified in the future.

When the bear is asleep, nothing will awaken it. The crew can work on it freely without worry of him resisting. A shot of mikedimide is injected as an antidote for the nembutal to assure no ill effects from the drug. The steel trap is removed from the bear's leg and processing begins.

The dart is removed and a shot of penicillin is injected around the wound to prevent infection. Methiolate is then applied to all open cuts. The bear is measured from head to foot and observations are made on the teeth, condition of pelt, sex organs, scars, and total weight. Measurements of the teeth provide data for a study on bear-aging techniques. Plaster of Paris molds are made of the teeth for study.

When the bear has been processed, it is placed in a comfortable position and left alone to wake up and be on its way. The crew always checks the spot the next day to see if the bear got away all right.

Helping Stickley on the North River area were Fairfax Settle and Ray Williams. On the Big Levels area with Clatterbaugh were Max Brugh and Edward Knipling, all sophomores in forestry at V.P.I.

Michigan was the first state to trap bears for study, but New York was the first to make a big project of it. Two hundred bears were trapped in two years in the Empire State. This year, West Virginia and Virginia took up the study.

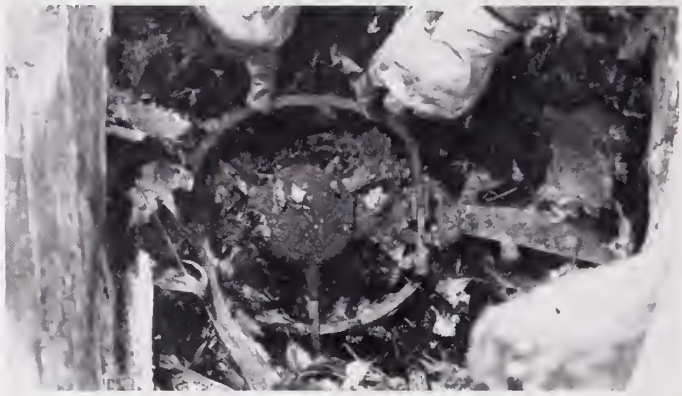
Since this is the first summer that Virginia has trapped bears, it is too early to see any concrete results from the study. Should any of the tagged bears be taken during the open season this winter, however, information as to the place and date of the kill and the condition of the bear would be of great value.

Since the trapping program was only conducted in two counties, Augusta and Rockingham, the state-wide population cannot yet be estimated, but it is hoped that an expanded trapping program in the future will give some idea of the state's total bear population.

According to Stickley, since 28 bears were taken from two counties in a short time, there are perhaps more bear in Virginia than previously estimated. He believes there may be at least 1,100 bear now in the 1,300 square miles of bear range in Virginia. The bear kill in Virginia increased for the first time in five years last season, indicating a population increase. However, there are also more bear hunters than ever before. Stickley feels that the increasing hunting pressure might endanger the population if a management program is not conducted. Finding out as much as possible about the bear is the first step toward a sound management program.

Hunters taking tagged bear are urged to send the tags and information on where and when the bears were taken to the Commission of Game and Inland Fisheries, P.O. Box 1642, Richmond. Cooperating hunters will be sent $15 for their assistance.

First step is the preparation of the set. Here, Fairfax Settle prepares a cubby set at North River.



Trap is placed at base of right wall in cubby set. When set trap is covered with leaves and surrounded by "stepping sticks."

Bait is tied to stump when set is ready.

Roy Williams drags beef head in two directions approaching trap to attract bear.

After being "shot" with sedative, yearling bear relaxes and waits to be freed from trap.

Teeth measurements are used to help determine age.

Bears are tagged before anything else is done to insure a means of identification.

Williams and Settle measure total length of the one-and-a-half-year-old bear.

Steel trap is removed and foot is checked for injury.

Data is also taken on width of front feet.

Fairfax Settle measures a yearling's head.

This yearling bear was found to weigh 79 pounds.

# Virginia's Contribution to the

By Mrs. C. DODSON MORRISETTE
*Norfolk, Virginia*

Commission Photos by Kesteloo

IN 1953, Dr. D. Ralph Hostetter, president of the Virginia Society of Ornithology, appointed a conservation committee under the chairmanship of W. F. Rountrey for the purpose of obtaining state legislation to protect hawks and owls. The efforts of the first year were unsatisfactory and the 1954 General Assembly met before definite plans could be worked out.

All efforts were then geared toward the 1956 Assembly and to win support of other interested groups. The Virginia Wildlife Federation, a group of sportsmen, were appealed to. The merits of such legislation had to be presented to them twice before they were persuaded to work for it. This was in October before the Assembly met in January. The Commission of Game and Inland Fisheries also gave its support to the proposal.

In January 1956, Delegate Cross from Norfolk County consented to sponsor the bill through the House, where everything went well. However, it was killed by a tie vote in the Senate committee.

After the failure, Rountrey proceeded to gather other supporters. Through the efforts of Mrs. C. L. Burgess, the state Federation of Garden Clubs agreed to work for the bill. Personal appearances before civil organizations and in the schools resulted in actual support each time. Through its membership, the Virginia Society of Ornithology also approached practically every member of the General Assembly. Again the bill had the support of the Virginia Wildlife Federation, and local bird clubs throughout the state added their strength.

When the General Assembly convened in January 1958, plans had been well laid. Delegate Tom Frost, whose wife is a member of the VSO, persuaded representative Baldwin Locher, chairman of the House Committee on Game and Inland Fisheries, to sponsor the bill, making the patrons Messrs. Locher and Frost. At every committee hearing an excellent delegation, composed largely of garden club and VSO members, appeared in behalf of the legislation. C. C. Steirly and Rountrey were the principal speakers. Though there were some proposed changes and alterations, none of these materialized, and the bill was finally passed. It is the original bill that Rountrey drew up in 1956

Reprinted from the May-June 1958 issue of *The Raven*.

Predation is a biological process that tends to prevent excessive increases of prey species. In the case of undesirable prey species, this constitutes an inexpensive form of control. The golden eagle, shown below, is an occasional visitor to the Old Dominion from the West.

# Protection of Hawks and Owls

and to which the Virginia Wildlife Federation made some slight changes. This bill will not only protect hawks and owls, but for the first time eagles will be protected by state law.

A filing cabinet in Rountrey's home packed with papers and letters can attest to a portion of the time and effort that went into the successful passage of this much needed piece of conservation legislation. A complete educational program was necessary to get it over and further planning is required to educate the public regarding the usefulness of these birds and acquaint them with the various species. The bill was passed as follows:

Be it enacted by the General Assembly of Virginia:

That ** 29-132, as amended, and 29-133 be amended and reenacted as follows:

*29-132. For the purpose of the hunting and trapping laws of this state, big game shall include bear, deer and elk and small game shall include all other game birds and game animals.

Wild birds and wild animals shall be classed as follows:

(a) Non-migratory game birds. —Grouse, ringnecked and other introduced species of pheasant, bobwhite quail and turkey.

(b) Migratory game birds.—Doves, ducks, brant, geese, swan, coot, gallinules, sora, other rails, including Virginia, king and clapper rails, plovers, snipe, woodcock and yellowlegs.

(c) Game animals.—Bear, deer, elk, fox, rabbit and squirrel.

(d) Furbearing animals.—Beaver, mink, muskrat, opossum, otters, and raccoon.

(e) Predatory or undesirable species of birds and animals.—Blackbird, buzzard, crow, English sparrow, hawk, jaybird, owl and starling, weasel, wildcat, skunk and all other furbearing animals, provided, however, that hawks and owls shall be so classed only when a landowner or his agent considers it necessary to kill these species to protect from destruction his poultry or the game birds on his property, or when the board of supervisors of a county considers it necessary to permit the killing of these species to protect poultry or game birds in such county.

*29-133. There shall be a continuous open season for killing predatory or undesirable species of wild birds and wild animals as defined in *29-132.

This bill was signed by the Governor, March 4, 1958, and became effective on June 27, 1958.

Widespread and unrestricted persecution of predatory birds is unjustified biologically. Predator control should be an emergency operation, employed only until basic remedies, frequently the correction of land abuse, can be applied. The barn owl, below, eats practically nothing but mice.

"We were fortunate enough to get almost uncomfortably close to a two-year-old black bear at the edge of a large waterhole on top of the mountain . . ."

*A visit to the field reminds commissioner of when*

# A REBEL YELL SAVED THE DAY

By THOMAS G. HERRING, *Commissioner, Seventh District*

AT the suggestion of our able Commission chairman, Beverley W. Stras, Mrs. Herring and I accompanied game biologist J. E. Thornton and Mrs. Thornton on a tour to inspect some of the habitat improvement work done on the George Washington National Forest by the game division of the Virginia Commission of Game and Inland Fisheries with the excellent cooperation of the U. S. Forest Service. Happily, we selected one of June's very perfect days and found most access roads quite passable. We were able to visit the bulldozed forest openings, where grasses and water holes have been provided to increase the area's carrying capacity for game, attract deer away from farm land and give hunters room to spread out during the deer season.

We were fortunate enough to get almost uncomfortably close to a two-year-old black bear at the edge of a large waterhole on top of the mountain in Augusta County, back of the old Shifflett place. The bruin seemed quite anxious to be someplace else after seeing us. Near where we spotted the bear was one of the first forest observation towers, made of strips nailed to a tall tree and planks nailed between the forked limbs.

**The bear's modesty in yielding the floor to strangers reminded me of an experience recounted by a Confederate veteran. He heard some noise in an old hollow tree, the top of which had broken off some distance up. The trunk was supported on one side by dead limbs touching the ground. With very little trouble, therefore, the man climbed up and saw two young cubs inside the base of the tree. Without much foresight, he worked his way down into the tree. The cubs made quite a noise, and when the man got down and looked up he realized why the light had dimmed. The mother bear was above him, backing down to investigate what trouble was going on in the home.**

**Absence of body is said to be preferable to presence of mind in time of emergency. The man realized the need of the former and availed himself of the latter by grabbing the bear's tail with both hands and giving the Rebel yell. In such crowded quarters, that must have been an awesome and terrifying sound! He said that it worked; never had he seen an elevator go up so fast or continue so long after it reached the top of the building! By this quick thinking was he able to escape the penalty that would otherwise have been imposed upon him for the liberty he had taken with the entire bear family.**

When we realize the terrible squeeze that civilization is placing on wildlife and how inadequate seems the most commendable effort put forth by farmers with the help of the Game Commission, it is most heartening to know that habitat improvement in the forest is not being overlooked. I observed the creation of these feed plots some years ago and endorsed the move. Now I realize they are even more important than I had anticipated. The access roads to the plots are closed, of course, except during the hunting season, so that the wildlife will not be disturbed or surprised by man and will find preferred grasses and water where none had formerly been.

VIRGINIA WILDLIFE

# CONSERVATIONGRAM

**Commission Activities and Late Wildlife News . . . At A Glance**

BIG GAME TROPHY CONTEST AWARDS ANNOUNCED. Winners of the 1958 Big Game Trophy Contest, held at Harrisonburg on November 1, 1958, have just been announced. Top deer trophy prize went to David H. Wolfe of Craigsville, Virginia for his 16 point buck shot last season in Augusta County. His prize was a 30-30 Savage rifle. In the archery class, Lynn Driver of Broadway won first prize with his 8 point buck shot in Rockingham County. In the black bear contest, Landall McQuarry of Rockfish, Virginia won first prize.

DUCK STAMP SALES UP. In the fiscal year 1958, duck stamp sales jumped to a total of 2,355,353—more than in 1957 but not quite equal to the 1956 record breaker, according to a recent report from the U. S. Fish and Wildlife Service. Virginia sales this past year totaled 25,576.

ARCHERS HAVE SUCCESSFUL SEASON. Virginia's bow and arrow enthusiasts seem certain to bag a record number of deer this year. In the recent October 15-November 1 statewide season, reports were received of successes all around the state; 25 deer were tagged in Shenandoah County alone.

DOG WORK TAKEN OVER BY MORE COUNTIES. More counties have taken advantage of the Act of the 1958 Virginia General Assembly which gives them the opportunity of taking over their local dog law enforcement. Under the provisions of this act game wardens are relieved of this work so more time can be placed on fish and game law enforcement. To date, 27 counties have hired a man to handle their dog laws: Accomack, Augusta, Brunswick, Caroline, Dickenson, Fairfax, Fauquier, Giles, Halifax, Henrico, Henry, Lancaster, Mecklenberg, Montgomery, Norfolk, Northumberland, Prince William, Princess Anne, Pulaski, Richmond, Roanoke, Rockbridge, Surry, Tazewell, Westmoreland, Wythe and York.

STATE FORESTS CLOSED, THEN OPENED TO HUNTERS. The Buckingham—Appomattox, Cumberland and Prince Edward State Forests were closed to the state's hunters on October 28 by George Dean, State Forester, who acted after the petitions of landowners around the forests had claimed unwarranted trespass and wanton slaughter of game in previous years. The loss of 45,000 acres of public shooting land was objected to by organized sportsmen, resulting in withdrawal of the original petitions. The forests were reopened to sportsmen for the entire general hunting season on November 7. Regulations will parallel those existing in the counties in which the forests are located. Permits costing one dollar are required and will be sold at Division of Forestry offices at Farmville and Cumberland Forest.

COMMISSION FIGHTS GATHRIGHT DAM. Proponents of a dam on the Jackson River which would flood the Virginia Game Commission's 18,500-acre Gathright Wildlife Management Area are at work again. The Commission has taken a stand against this so-called flood control project, stating that, "This property is much more valuable to the state and to the public as a public hunting and game conservation area than it would be as another expensive hydroelectric project of the federal government."

BACK BAY WATERSHED DEVELOPMENT DELAYED. At a meeting of the State Soil Conservation Committee in Richmond on November 13, the proposed Princess Anne County small watershed development and attendant drainage of silt-laden waters into Back Bay was delayed for further study. The Virginia Game Commission and the U. S. Fish and Wildlife Service were both alarmed at the damage this project could do to the very valuable Back Bay waterfowl area and suggested that the silt-laden waters be directed toward another outlet.

COMMISSION ASKS MINIMUM FLOWS ON STAUNTON RIVER TO SAVE STRIPERS. The Federal Power Commission has been asked by the Virginia Commission of Game and Inland Fisheries to insist that the Appalachian Electric Power Company provide a minimum daily flow of 210 cubic feet per second at the Altavista gauging station on the Staunton (Roanoke) River near the tailrace of its planned Smith Mountain Dam to preserve the sport fishery in that river. The Commission also requested that the power company be required to maintain a minimum flow of 2,000 c.f.s. at the Brookneal gauging station from April 15 through June 10, the period during which striped bass from Kerr Reservoir spawn in that area.

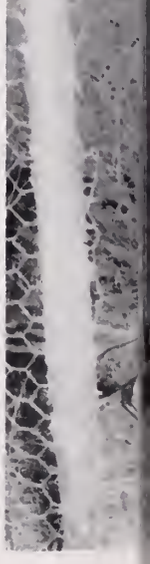
# First Release of Bl

## in the U. S. was made September 27, 1958, in Charles
## Here's how the Virginia Game Commission made this

Virginia State Game Farm superintendent Dennis Hart watched over incubating eggs from birds flown to U. S. from Iran in 1956 . . . six blackneck-ringneck crosses were raised to maturity and kept on ground in special holding pens . . . 300 crosses were captured wi

Commission Photos

The birds were held overnight in a holding pen to protect them from predators while they recovered from the shock of capture, banding and haulir to be liberated in the U. S. stepped out cautiously, then tried their wings . . . game warden B. L. Adams supplemented the natural feed of soybeans



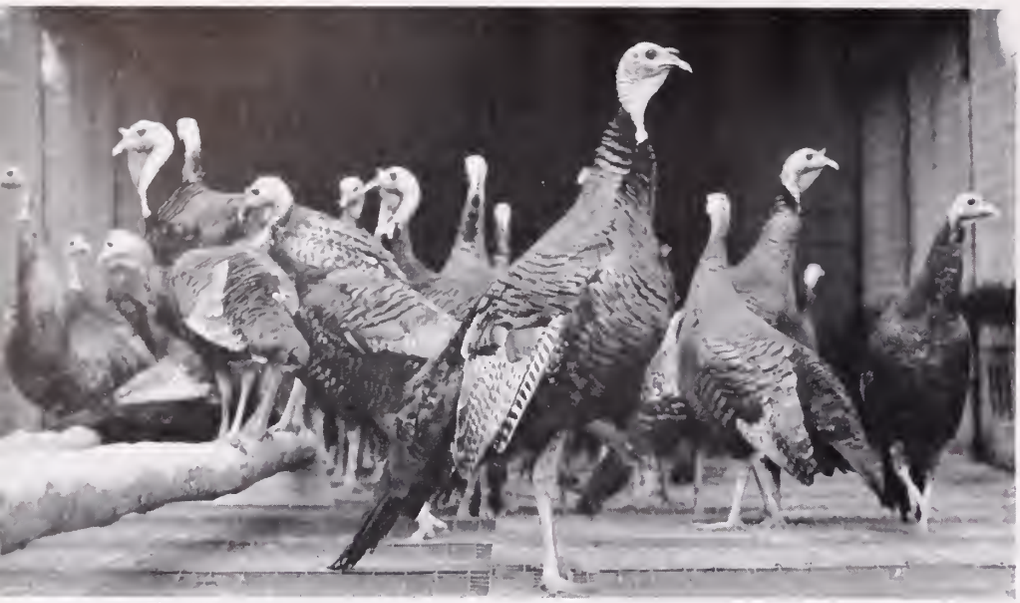
# ackneck Pheasants

## ity County, Virginia, just five miles from Jamestown.
## irst trial liberation of 300 blackneck-ringneck crosses:

eight-week-old birds were kept in brooder houses, where they were fed mash and scratch grain. . . . 129 pure blackneck and 1,656 ets, banded, placed in crates and trucked to Sandy Point September 26 where a holding pen filled with small pines was ready for them.

teloo and Cutler

. game biologist Herm Tuttle rolled back the gate at 10:00 a.m. September 27 and the first Iranian blackneck-Chinese ringneck cross pheasants corn with scratch grain . . . local sportsmen were told this was the first liberation under the Foreign Game Introduction Program in Virginia.



The Virginia game farm turkey has characteristics of both wild and domestic turkeys.

# The Conflict Between WILD and DOMESTIC TURKEYS

By JACK V. GWYNN
*Game Research Biologist*

Commission Photos by Kesteloo

WHILE the native wild turkey is truly an original American, the domestic turkey is a transplant brought to these shores by our English ancestors. The first white man to record the wild turkey as a native of the New World was the Spanish explorer Cortez. He found it both wild and domesticated by Aztecs in eastern Mexico.

Englishmen first saw the native wild turkey at Jamestown, but the domestic turkey, which had been taken back to Spain in the early 1500's, had spread through Europe and become well known to the English before the Jamestown Expedition. Our domestic turkey, then, was actually transported from Mexico to Spain, to England and then to Virginia. The native wild turkey of Virginia has never been domesticated, however.

Since the general characteristics of the Virginia (wild) turkey—*Meleagris gallopavo silvestris*—and the Mexican (domestic) turkey—*Meleagris gallopavo gallopavo*—are similar, mating can occur successfully between the two. This fact causes a great deal of concern to wildlife managers and sportsmen.

There were some differences between the wild turkey and the domestic turkey even before the Mexican subspecies was domesticated, but many of the differences have been brought about by man's selective breeding efforts. External differences between the two turkeys are mainly those of form and coloration.

The wild gobbler is the ultimate in streamlined design, except during the breeding season when he sports a "breast sponge" which supplies the additional energy required by a courting gobbler during the period when his romantic instincts interfere with his inclination towards food finding. Before and after courting, the wild turkey has a slender body which tapers to a long neck upon which sets a large-eyed but small narrow head. Long tail feathers and long narrow legs make this streamlined appearance complete.

Last of a series of three articles on the wild turkey in Virginia by project leader Gwynn.

Caruncles and wattles on the throat and head of the young wild tom are inconspicuous, although a small increase in size with age occurs. Because of this, the blue pigment of the skin on the head and neck is usually predominant except during the breeding season when the color of the wattles may cause the head to look reddish. The body feathers of the wild turkey are generally very dark and cause the bird to look black at a distance. The tail feathers are tipped with cinnamon brown.

The domestic turkey, on the other hand, is heavy and stocky in appearance, with shorter and larger-boned legs. A larger head is set upon a thick neck, and the tail feathers are shorter. Large, prominent wattles and caruncles cause the head to look more reddish throughout the year. The body feathers are lighter in color and the tail feathers are tipped with white instead of brown.

Most important internal (physiological) difference is in the wild temperament of the birds. It is this quality of "wildness" — that ability to recognize danger in the outdoors and avoid it successfully—that sportsmen most admire in the turkey.

The basis for this wild temperament is tied very closely to the birds' endocrine and nervous systems. The wild turkey has been found to have a keen and highly sensitive nervous system and a large brain, while the domestic turkey has a relatively dull nervous system and a smaller brain. The domestic turkey's endocrine glands, which secrete hormones to make possible increased body activity, are smaller than those of the wild turkey, and do not permit as rapid reactions or increase in body activity as do the larger glands of the wild turkey.

The wild turkey and the domestic turkey have two vastly different sets of characteristics because, over the centuries, nature has seen to it that only those wild turkeys capable of surviving and successfully rearing their young despite predators, food shortages and bad weather would reproduce the species. Survival in the wild demanded in the wild turkey an extremely sensitive and fast-acting nervous and endocrine system.

On the other hand man has set up a different system of selection for his domestic turkey. He is primarily interested in those characteristics that will prove beneficial to himself: "barnyard" temperament, which allows successful rearing under crowded conditions of close confinement; early breeding dates; and stockiness for maximum food production.

No one has ever been able to raise any appreciable number of wild turkeys in confinement because "wild temperament" does not allow the wild turkey to adapt to conditions of close confinement. In order to obtain a turkey suitable for game farm production, a cross between the wild turkey and the domestic turkey has been used.

The result of this cross, presently known as the game farm turkey, could rightly be called a hybrid. The poults of this cross will have characteristics of both parents; some will closely resemble either one or the other parent, but the average will have a combination of characteristics about halfway between the two extremes. Repeated failures of early stocking attempts in Virginia stimulated efforts to produce a "wilder" game farm turkey.

Techniques which allowed the game farm hen to be bred each spring by native wild gobblers—commonly referred to as the "wild cross"—were developed. Through use of the wild cross, the game farm turkey has become established in areas of suitable habitat.

"Wild crosses" result in only an increased degree of "wildness," however. Beyond this increase the selective factors in operation at a game farm permit no further advance. Survival under conditions of close confinement calls for a temperament more gentle than that of the true wild turkey. The wilder young poults become through "wild crosses" the higher becomes the mortality. The wildest of turkeys just hatched have been lost through starvation simply because they would not learn to eat on their own.

This knowledge of the limitation of the game farm turkey can be used to advantage in our turkey restoration program. Biologically, the game farm turkey should be used only to introduce the turkey into an area where it is not present.

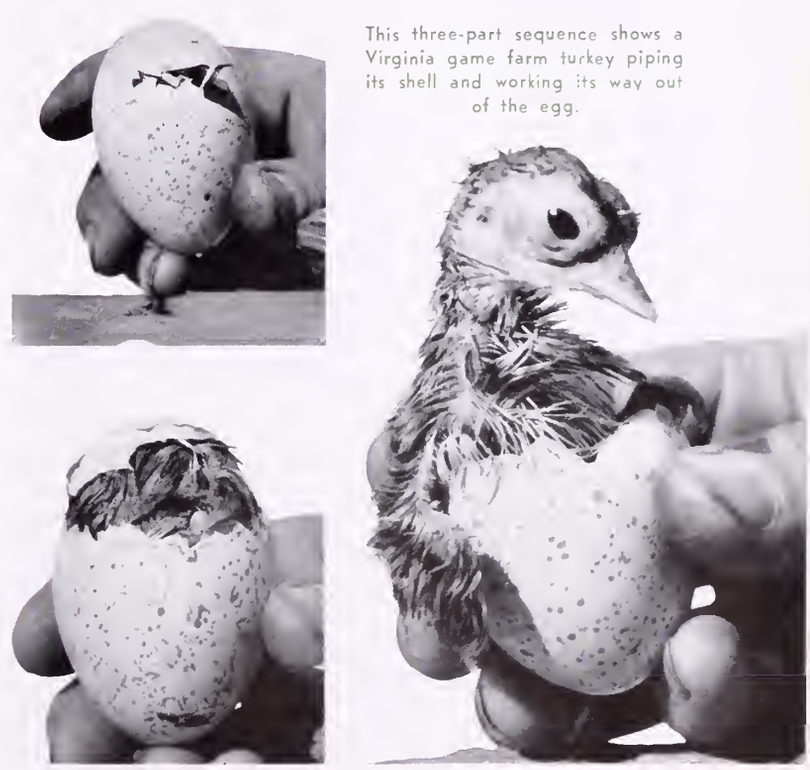
The finest stock available should be used in any stocking effort. In the case of the turkey this would mean use of native wild birds that had been trapped in the wild. Efforts to obtain these wild-trapped birds should be of first priority in any restoration program.

The main reason why game farm turkeys should not be stocked in areas where there is a resident population of native wild birds is simply that it does no good. Just as land has a limit upon the number of cattle or pigs or deer that it can support, so also does this land have a limit upon the number of wild turkeys that it can support. This is known as "carrying capacity." Factors which prevent the wild turkey from reaching this level include poaching, disease, predation, legal hunting and accidents. The fact that a resident population of wild turkeys is present, however small, assures us that the highest quality stock is available to produce an increase in the population as soon as the limiting factors of the habitat are altered.

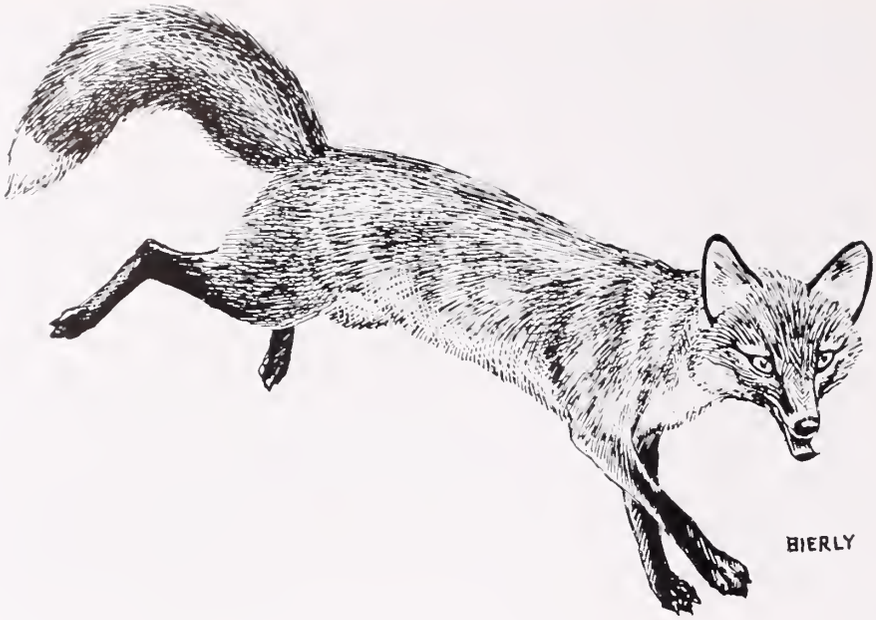
If education and strict law enforcement could reduce the amount of illegal killing, this would increase the production and the wild turkeys present would increase. Better forest management to provide the requirements of the turkey would also cause an increase in carrying capacity. If the native wild turkey can barely hold its own, it does not stand to reason that we should "send a boy to do a man's job." When game farm turkeys are used, the native wild turkeys stand to lose some of their important wild characteristics through hybridization.

Another reason for not stocking game farm turkeys where native wild populations already exist is the threat of disease. Game farms put maximum efforts upon sanitation and medication, but disease is a constant threat. It is possible for protozoan, bacterial and virus diseases to be carried onto our forest lands and into our native flocks by the game farm turkey. The importance of this fact should not be underestimated.

Once the game farm turkey population has become established, natural selection again begins to select those characteristics most needed for survival in that particular area. Where, before, the selection process worked to provide a turkey that was best fitted for being raised at a game farm, the tables are now turned, and the selection process works in favor of a wilder and more productive turkey. The length of time that is required for nature to produce a wild turkey from a game farm turkey is not known, but it is felt that as soon as the game farm birds become established, further stocking should cease, enabling nature to provide a truly wild turkey. This stage has already been reached in several areas in the southwestern portion of Virginia.



This three-part sequence shows a Virginia game farm turkey piping its shell and working its way out of the egg.




Fox hunters are thronging to the peninsulas which jut out into Buggs Island Lake, which was created by Kerr Dam in south-central Virginia. Here they find ideal hunting grounds.

# FOX HUNTING

## *Along the Shores of Buggs Island Lake*

By A. A. LEGRAND, *First Vice President*
*Virginia Fox Hunters Association*
*Boydton, Virginia*

WE found a fox hunting paradise along the shores of Buggs Island Lake, a great new body of water lying partly in Virginia and partly in North Carolina. Created in 1953 upon completion of the John H. Kerr Dam in Mecklenburg County, Virginia, the lake is so named because it surrounds an island in the Roanoke River named after its early owner, Samuel Bugg.

The Kerr Dam was built primarily to protect the lower Roanoke River Basin from periodic floods. However, the project has also created opportunities for boating, fishing and hunting. Backed up by a concrete structure more than one-half mile long, the reservoir is fed by the Roanoke, Dan and Staunton Rivers. It has a shoreline of 800 miles and at an average level covers 50,000 acres.

Many acres along the shore are ideal for hunting. These isolated areas affected by "backwater" furnish fox hunters with hunting grounds that are not plagued with highways, crops, house dogs and many of the other distractions of the chase.

Jutting out into this large body of water are peninsulas varying in size from a few acres to several thousand acres. Many are almost enclosed by water, which proves to be helpful in handling our hounds. Our favorite peninsula is Monte Pavo, deriving its name from two Spanish words meaning "turkey mountain." Until recent years, wild turkeys were plentiful here, but due to the greed of some so-called "pot hunters," there are now few in the area.

Monte Pavo was once a private estate, located on a high bluff overlooking the river. Here, on this 4,500-acre, ten-mile-long peninsula we cast our hounds, and seldom have to move to hear an all-night chase after many foxes.

This area is inhabited by both red and gray foxes, and in the course of a hunt our hounds will run a number of them. Seldom do they run any single fox over two or

Reprinted from *The Hunter's Horn*

three hours, however, for the foxes have excellent cover to escape into.

Through a mutual understanding with my hunting friends—Pete, Sam and Penny Johnson, Roy Thompson, and Robert Allgood—we all meet on Monte Pavo about twice a week for an all-night race. These hunting friends are born fox hunters whose ancestors were Virginia hunters, and they truly love their sport. They are fond of a good hound, but have contempt for one that is not "true blue." Because they hunt two and three nights a week and go prepared to have an all-night hunt, it is always a pleasure to race with them.

I will attempt to relate a recent race we had on Monte Pavo, but—as you know—no pen, typewriter or adjectives can do a good chase justice.

On a Friday night last summer we met, as planned, at the entrance of the peninsula at 7:30 p. m. We drove down the peninsula about three miles and cast our hounds at the old Goode place. Within five minutes a fox was jumped. The night was cool and still, and the backwaters could be heard lapping the shoreline. The race grew fast and furious and the hounds were well packed. Hard driving was the theme of this race. The fox would make wide circles around us, dash up the shoreline and back again—never going out of hearing.

Well into the second hour the pack was closely pressing its quarry. Old hounds and puppies were beginning to lag. Breaks in the chase were few and the foxwise hounds lost no time in solving the crafty moves of the fox. Monte Pavo was alive with real hound music. Then the silence that all fox hunters are so familiar with was at hand.

This good-running fox had taken refuge in a slab pile. This always pleases us because he will be there to run again.

A wide-circling young hound jumped another fox quite close to us. The chase was on again, and the race that had just ended was recorded in our memory. This time our hounds were running a wider-ranging fox. The pack would fade out of hearing and return shortly, driving for the kill. I am sure the noble sires of the past whose names sprawl across the pedigrees of these hounds, such as Flying Cloud, Billy Bristol, Coy Flowers, Pine Ridge Fred, Wolf Hill Troubadour and others, would, if it were possible, stand at attention and wag their tails with approval of this performance by their progenies.

Continuous running went on during the night. As daybreak came, a large gray flashed by us headed for the water, the pack in hot pursuit. Misjudging his lead on the pack he took to the water for a distance and swam back to shore a short way down the peninsula. A number of the hounds plunged in and both fox and hounds were in the lake at one time. His scent was picked up on shore and after a short circle he went to earth.

We are grateful to our Creator for our hounds and hunting grounds, and for a country where a man can select his occupation and his form of recreation. Fox hunting is our way of living—living, we think, at its best.

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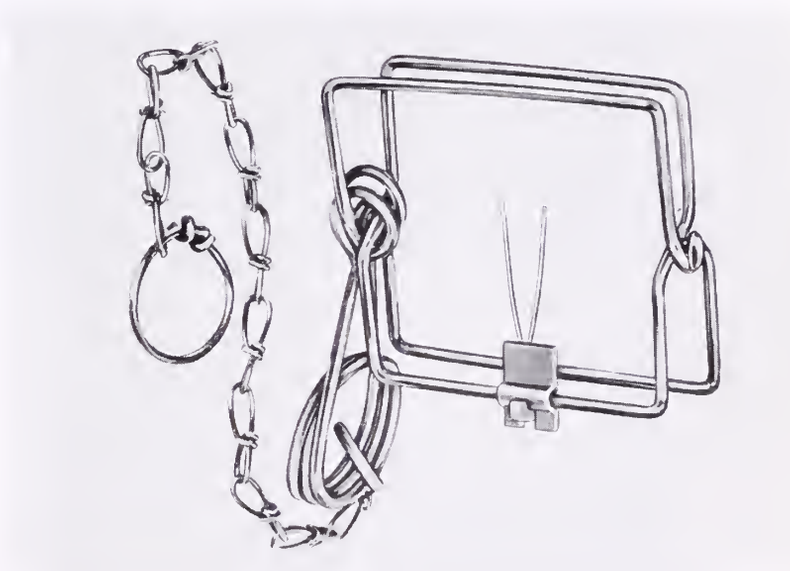
# Man's Search For Humane Trap Ended

FOR 300 years man has been searching for a humane type of trap. And since 1929, trapper Frank Conibear has been working deep in the wilds of northwestern Canada to develop and perfect the trap which has eluded man all these years. Now, according to the Animal Trap Company of America of Lititz, Pennsylvania, the trap is perfected.

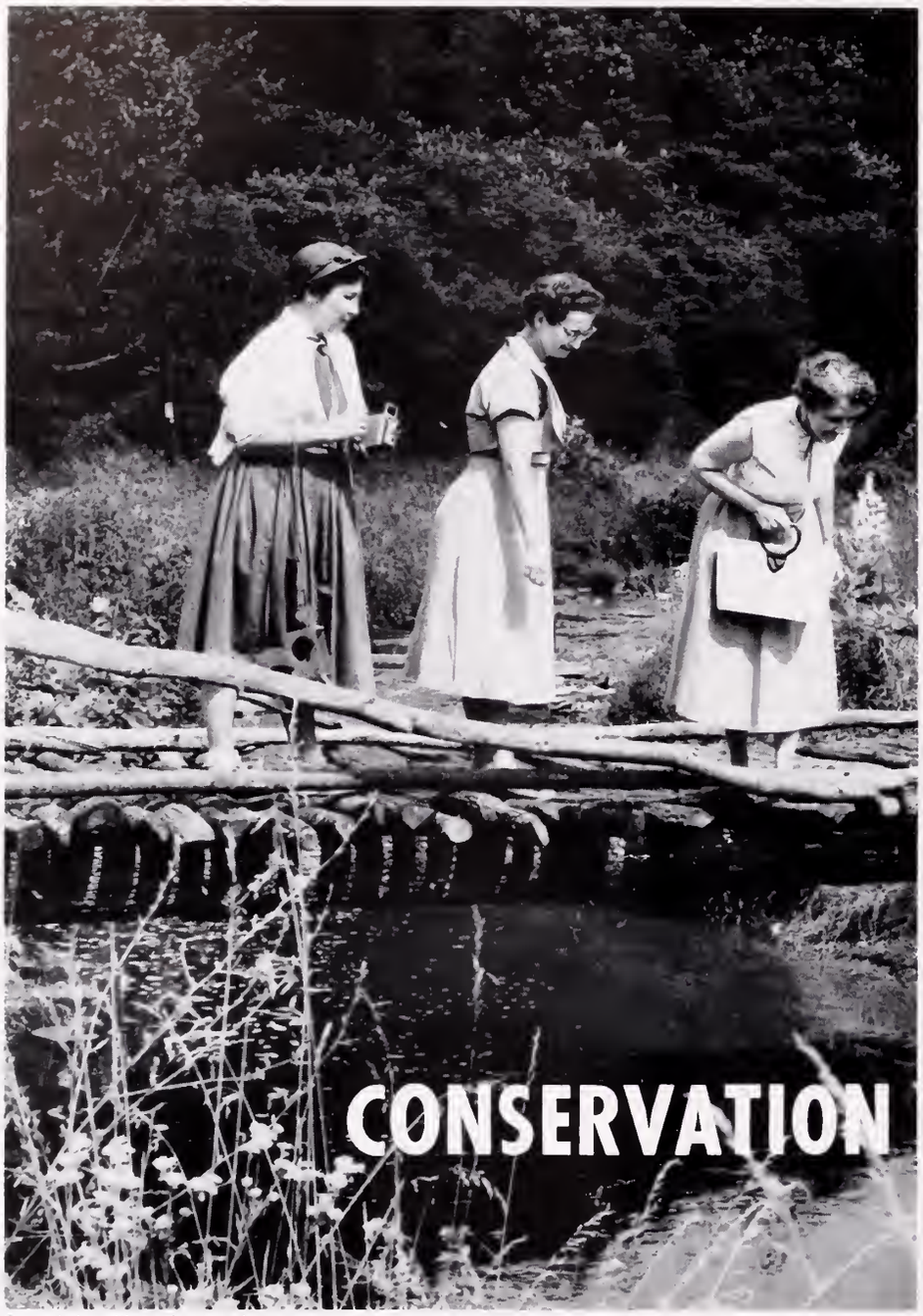
The first size of this revolutionary body-gripping trap, designed to kill fur-bearing animals instantly with no suffering and no wring-off, has been released by this manufacturer. Known as the Victor Conibear trap, this trap is the first radical change in trap design since Sewell Newhouse invented the famous leg-hold trap in 1848.

Thoroughly tested for several years in Canada by professional trappers, the No. 110 Victor Conibear trap is said to be exceptionally effective for trapping muskrat, mink, opossum, skunk, weasel, barn rat, wharf rat, squirrel, civet cat and similar size animals. Other sizes will be introduced soon.

The trap has two square jaws formed of steel rod. The jaws work on a "scissor-hold" action powered by a strong



coil spring. The special trigger construction permits the Victor Conibear trap to be baited for bait sets or used for blind sets. The trap is also ideal for any type set in holes, runways and cubbies, as a suspended set and for setting on top of rafters or poles. It works equally well on ground, submerged in water or when covered with snow. It is light-weight, folds flat for compact carrying and is easy and safe to set.



Teachers at a conservation short course at V.P.I. sponsored by the Virginia Resource-Use Education Council examine a creek for wildlife.

Commission Photo by Harrison

# TEACHERS BECOME CONSERVATION STUDENTS

By GEORGE H. HARRISON
*Educational Assistant*

THIS September, 114 Virginia elementary and high school teachers went back to classes better prepared to teach conservation than ever before in their lives. Natural resource conservation short courses sponsored by the Virginia Resource-Use Education Council and taught in three Virginia colleges this summer were the reason.

E. W. "Ed" Mundie, extension soil conservationist at V. P. I., was in charge of these courses, which were given at Virginia Polytechnic Institute, Virginia State College and the College of William and Mary. Students in these courses—elementary teachers, for the most part, from all over the Commonwealth—were given a better understanding of how our natural resources should be used so that they, in turn, might pass this understanding on to their students.

To accomplish this, authorities on marine life, geology, soil, water, forestry and wildlife taught separate sections during each course. The courses, three weeks long at Virginia State and at William and Mary, and two and a half weeks at V. P. I., were broken down by subject and further divided into field trips, lectures and laboratory exercises.

Field trips were made by bus to tree nurseries, paper mills, fish hatcheries, farms and to farm fish ponds. A small group at William and Mary took an evening trip to nearby Camp Peary where they saw 227 deer in 50 minutes, something that no one there will ever forget.

Instruction was provided by various agencies concerned with natural resource management, including the Virginia Division of Forestry, the Virginia Commission of Game and Inland Fisheries, the U. S. Soil Conservation Service and professors and instructors at each of the three institutions. In the evenings, speakers came from indus-

trial firms and various governmental organizations to talk to the teachers.

Three semester hours credit (four and a half quarter hours credit at V. P. I.) were given each teacher completing the course. These credits could be applied to an advanced degree if the individual so desired.

Some 53 organizations contributed funds to provide scholarships which took care of "on campus" expenses for most of the teachers attending the sessions. Some of the contributors were the Virginia Soil Conservation Districts, the Virginia Division of the Izaak Walton League of America, garden clubs, sportsmen's clubs, county Farm Bureaus, the Virginia Department of Education and many industrial firms and banks.

Thirty-three teachers attended the first course this summer, held at V. P. I. in Blacksburg June 16 - July 2. There were 40 teachers at the second one, held at Virginia State College in Petersburg June 30 - July 18. A group of 41 teachers made up the last class, held at the College of William and Mary in Williamsburg from July 28 - August 15.

Upon returning home, some of the teachers wrote letters of appreciation. Matile Tyler, who attended the course at Virginia State, said, "I'll be able to carry back to my community and to all people with whom I come in contact much information regarding conservation of the natural resources of Virginia." Earnestine Brewster, after attending the William and Mary short course, wrote, "I did enjoy the time at William and Mary so very much. Didn't know it was possible to learn so much in such a short time. Can hardly wait to begin teaching this year."

The sponsoring group, the Virginia Resource-Use Education Council, is a voluntary organization organized to promote and improve conservation education in the Old Dominion. Made up of 30 representatives from state and federal natural resource agencies and several Virginia colleges, the Council seeks to increase cooperation between its member agencies and to help coordinate resource-use education activities in the state.

The first Council-sponsored conservation short course was held at V. P. I. in the summer of 1956. The Council was successful in obtaining $2,500 in scholarship money for this program from interested organizations, clubs and industrial firms, making it possible for 29 teachers to attend this workshop.

The summer of 1957 saw two workshops successfully promoted. One at V. P. I. and a new workshop at the College of William and Mary were attended by 55 teachers, and a total of $4,000 in scholarships was made available to them by the Council.

The summer of 1958 has brought a third workshop at Virginia State College and resulted in the most successful summer to date.

When the workshops have been successfully established and proven to be valuable and popular, it is hoped that the various institutions of higher learning will incorporate such courses into their regular curricula.

Though the Council is making much progress toward its objectives, it is aware that much work remains to be done in giving conservation education the proper emphasis in the right places, and that initiative and leadership in conservation education are needed. The Council is especially grateful for the support for this program that it has been receiving from private organizations and businesses throughout Virginia.

Commission Photo by Kesteloo

Elements of the science of wildlife management are presented to the teachers by Game Commission executive director Chester Phelps.

Commission Photo by Harrison

Carl Holcomb, extension forester at V.P.I., explains how trees are killed by girdling to create clearings.

Commission Photo by Harrison

Fires are put out with heavy extinguishing equipment, Warden Horner tells these conservation students at Virginia State College.

Fish biologist Jack Hoffman puts a metal jaw tag on a Shenandoah smallmouth. Fish are kept in holding box at left until several are caught; then all are tagged at once.

By M. RUPERT CUTLER
*Associate Editor, Virginia Wildlife*
Commission Photos by Kesteloo

FISHERMEN have been taking fewer smallmouth bass from the Shenandoah River in northern Virginia in recent years than they did when the river was first listed among the best bass fishing waters in the United States. Some blame the Commission of Game and Inland Fisheries' action in 1956 which removed the length limit on bass and extended the bass season west of the Blue Ridge from June 20-December 31 to June 20-April 30. Others believe that fishermen just aren't trying hard enough.

The Commission's fish division intends to find out why fishing success has declined on the Shenandoah and do something about the situation if it can. It has initiated a three-year study, to be financed in part by Dingell-Johnson federal aid funds, to determine rate of harvest, effect of size limit removal, fish movement and the relationship between smallmouth bass and channel catfish in that river.

Key to the success of this study is the return of the monel metal jaw tags and white plastic tubing back tags that were attached to 113 fish from the main stem of the river this year and that will be attached to many more from the North and South Forks of the river in 1959 and 1960.

Between May 1 and June 20, 1958, fish division personnel, with the aid of local sportsmen, managed to catch and tag 15 channel catfish, 14 largemouth bass and 84 smallmouth bass by pre-season angling with artificial lures in a 20-mile stretch between the low water bridge on the line between Clark and Warren Counties and the Highway 50 bridge in Clark County despite bad weather and muddy water. To add to the number of tagged fish in the area, 170 smallmouth bass were tagged at a Commission hatchery and released near the Highway 50 bridge on November 1, 1958.

To date, tags from only one channel cat, two largemouth bass and 26 smallmouth bass have been returned, but it is felt that this low return reflects the poor physical condition of the stream for fishing this year. No tags were returned between July 1 and August 25, when the water was extremely turbid, but the rate of return has picked up since that time. Fifteen of the 26 smallmouth returns were from those released November 1.

Next year, the division hopes to use more local fishermen to obtain fish to tag, under the supervision of game wardens. The fish division itself will have more personnel available to work on the project also, having hired University of Illinois graduate Paul Frey July 1 to work

full-time on trout and smallmouth bass projects west of the Blue Ridge. Frey is now stationed near Harrisonburg.

Several hundred signs with the message, "TAGGED FISH IN THIS AREA—PLEASE RETURN TAGS TO COMMISSION OF GAME AND INLAND FISHERIES, P. O. BOX 1642, RICHMOND, VA.—ONE DOLLAR REWARD," have been posted along the banks of the river in the area where tagging was carried out to alert fishermen to the possibility of catching a tagged fish.

Fishermen who catch tagged fish are asked to return the tag to the Commission's Richmond office together with a statement telling (1) the exact location where the fish was caught, (2) the date the fish was caught, and (3) the total length of the fish. The fish division thanks cooperating sportsmen by sending them a one-dollar reward and telling them where and when the fish they caught was tagged.

Fish biologists maintain that tagging does not damage the fish, but are nevertheless checking this in a hatchery under controlled conditions to see if a mortality factor should be used in their computations. The metal jaw tags were used only on fish between 10 and 12 inches long, while the plastic "spaghetti" tags were used on smaller and larger fish. The fish are handled very carefully during the tagging operation.

According to fish division assistant chief Robert G. Martin, preliminary studies, which have included collecting fish with electro-seines to determine rate of reproduction as well as the tagging work, indicate that the bass population of the Shenandoah River has suffered no ill effects from the removal of the length limit. More than an adequate number of small bass were observed during this year's collecting, he noted.

Information on fish movements will be of value to determine whether or not local regulations would be effective. Tag returns to date have shown that those 29 fish moved less than three miles from the point where they were tagged.

Fish technicians assume that untagged fish are harvested at the same rate that the tagged fish are harvested. Therefore, for example, if tags from 50 percent of the fish that were tagged are returned, they will figure that 50 percent of the entire bass population of the river is being harvested.

Local people have been hired to handle a full-time creel census on a small selected area which should show just what Shenandoah fisherman are catching, how long they fish, and how they fish — whether from boat or shore, with live or artificial bait, etc. — in hopes that this information might be applied in a general way to the entire river.

Information thus obtained will be compared with a voluntary creel census of the Shenandoah made by Eugene Surber in the 1940's to try to determine changes in catch per angler and catch per hour.

Electro-seining to sample the river's fish population at various points has helped round out the Commission's knowledge of the Shenandoah River and its bass fishery.

To attach "spaghetti" tag, technicians put a hollow needle through the fish's skin behind its dorsal fin and pull plastic tubing through.

The tubing is tied in an overhand knot leaving sufficient slack for growth. Excess tubing is cut off.

Each fish is weighed and measured before the fish is released. This data is recorded for comparison with information sent in later by fisherman who catch the fish.

*Bird of the Month:*

# The Screech Owl

By DR. J. J. MURRAY
*Lexington, Virginia*

A STRANGE atmosphere of mystery and superstition surrounds the little screech owl. There are places in the South where its wavering call from the rooftree is taken as a sure portent of a death in the family. Its call in the darkness has indeed such an eerie quality that it is not hard to understand these primitive fears.

Some birds get their names from their calls. Killdeer, whip-poor-will, pewee—these are well-known instances. In similar way, though more in description than in imitation, has the screech owl been christened. Yet the name it not very apt. A local name, sometimes heard and to me much more descriptive, is "shivering" owl.

Sometimes, out at our cabin on the Maury River in Rockbridge County, as we sit on the porch in the darkness, two or three of these spirits of the dark will be sounding their calls from the nearby trees: one with weird chuckles and catcalls; another with fearsome wails; and still another with a hollow, tremulous note, as when an empty dish that has been set at motion is trembling back to a balance. Each individual bird has an extensive repertoire. At times, with a ventriloquial quality, the same bird sounds first near and then far away.

The screech owl is much the smallest of our common owls. It is about nine inches from bill to tip of tail. It has very conspicuous ear-tufts and a short tail. One of the very interesting and so far unexplained facts about screech owls is the occurrence of two distinct color phases, reddish-brown and gray. This is not, as is the case with plumage variations in many species of birds, a matter of sex, age, region or season. The two phases may be seen in any variation of numbers in any family group.

Two slightly different geographical races are found in Virginia: The Eastern Screech Owl in the higher mountains and around Washington, and the slightly smaller Southern Screech Owl in the Piedmont and in Tidewater.

From the economic standpoint, the screech owl takes so many mice and eats the grubs of so many large insects that it is very beneficial to the interests of man; but it is only fair to point out that when the growing young owls in the nest are clamoring for food not a few songbirds fall victims to the hard-pressed parents.

These little owls nest in large holes in trees. Natural cavities in apple trees in old-fashioned orchards are favorite places. They will often occupy nesting boxes that are provided for them in orchards where such cavities are no longer permitted. The fruit grower who recognizes the aid of these eager mousers will be glad to give them such opportunities.

Here in their dark home four, five or even six eggs will be laid. As is often the case with hole-nesting birds, where there is no need of protective coloration, the eggs are white. Since there is no danger of their rolling out, the eggs are rounded rather than pointed.

Nowhere in nature is there in motion such an absence of sound as in an owl's flight. The soft, furry wing covering enables it to pass within a few feet of one's face without any noticeable noise. This is disconcerting when concern about its young makes a screech owl launch a sudden attack in the twilight on an innocent passerby.

# Legends of Christmas Greenery

What would Christmas be like without a little of the outdoors brought inside? Christmas trees, mistletoe and holly are all a part of Christmas in America.

How did the traditions of bringing a little of the woods indoors get started? How long have people been decorating their homes with greenery to celebrate the birth of Christ?

Ancients believed that evergreens were symbols of eternal life and worshipped them as such. Each tree was believed to be the home of a god or goddess, and the firs were especially revered because their always-green needles proved to the superstitious people that even the sun loved evergreens best, as it never turned its face from them to make them die.

Martin Luther has been credited often with originating the Christmas tree. Legend has it that he was walking through the hills one snowy Christmas Eve and became so impressed with the beauty of the stars shining through the branches of snow-covered evergreens that he took home a small tree and decorated it with candles for his children. This story may be fact or fiction, but it is true that Germany was the real home of the Christmas tree.

Commission Photo by Harrison

Mistletoe is a popular Christmas plant.

The legend of mistletoe goes back a long way, even before the birth of Christ. The mistletoe was one of the sacred plants of the Druids, and it was gathered with much pomp and ceremony. A white-robed priest cut the sacred mistletoe, using a golden sickle. Twigs and bits of it were distributed among those present, believing the plant possessed magic powers.

Thus having been tainted with paganism before the time of Jesus, for many years mistletoe was considered an unholy plant and was not used in decorations in church. Now, it no longer plays a serious part in holiday festivities but is used lightly and is a popular plant.

Scandinavians once regarded the mistletoe as sacred and if two foes met under the plant they laid down their arms and a truce was declared until the next day. Doubtless this was the beginning of the custom of hanging mistletoe over the doorways during the Christmas season, thus pledging to anyone who might walk beneath it peace and friendship.

Famed and beloved is the holly, used extensively for Christmas trees and in decorations. Legend says the Crown of Thorns was plaited from limbs of holly and before the crucifixion the berries were pure white, but after His death the plant was so sad the berries turned red like drops of Christ's blood.—G. H. Harrison

# Tasty Treats for December

Crisp bright December days see many a Virginia gentleman out to bag the choicest of game, the wild turkey. Even before the sportsman has started on the hunt he has visions of this tasty fowl ready for carving, and when he does bag that turkey and brings it home he expects the preparation and cooking of the fowl to be as perfect as his shot which brought it down.

When it is cooked just right, there is nothing more palatable and delicious than a Virginia wild turkey. Here are just a few hints on how to prepare and cook this favorite bird.

The right stuffing, such as the one below, is a *must* if the turkey is to have the rich flavor desired. (Allow three-quarters to one cup of stuffing for each pound of dressed meat.)

## ROAST WILD TURKEY

- 1 wild turkey, 8 to 10 pounds dressed weight
- ½ pound sausage meat
- ½ cup chopped onion
- 1 cup chopped celery
- 1 teospoon salt
- ¼ teospoon pepper
- ⅛ teospoon crushed thyme
- 5 crushed juniper berries
- ¼ cup chopped porsley
- 1 cup cooked chestnuts, chopped
- 8 cups soft breod crumbs (made from doy-old bread)
- 4 to 6 slices bacon
- melted bocon fot

Sprinkle turkey inside and out with salt and pepper. Cook sausage until well done, add onion and celery; continue to cook until they are tender. Add seasonings and bread crumbs; mix well. Put stuffing lightly into neck and body cavities. Close openings with skewers and string. Cover breast with bacon slices and cheesecloth soaked in melted bacon fat. Pull legs upward, wild turkey fashion, and tie together with string. Turn wings under. Place turkey breast up on rack in roasting pan. Roast in preheated 325-degree oven 20 to 25 minutes per pound, or until tender, basting frequently with bacon fat and drippings in pan. Remove cheesecloth, skewers and string. Serve with giblet gravy, acorn squash, broccoli, corn muffins, whole cranberry sauce. Makes 8 to 10 servings.

How can turkey that is left over be prepared in a most tasty way? May we suggest:

## CREAMED TURKEY

- 1 quart turkey broth or combination of broth and milk
- ½ cup turkey fat or butter
- ½ cup flour
- 2 cups turkey, diced
- 1 can mushroom soup (optional)
- 1 3 cup chopped pimento
- 1 small onion, chopped fine
- salt and pepper to taste

Strain and heat broth. Mix the turkey fat or butter with flour. Add hot broth gradually and cook until thick, stirring constantly. Add other ingredients. Pour in flat casserole, cover with rich biscuit dough cut with small cutter. Bake 10 to 12 minutes at 450 degrees F. This will make 10 servings.

—Nell P. Jones

## WILDLIFE ESSAY CONTEST

Wait a minute! Aren't you forgetting something? That essay contest they have been talking about all over the State isn't for the old folks, it's for you! There's $1800.00 just waiting for the lucky guys and gals that win this year.

If you are between 5th and 12th grades, get started thinking about the subject, "Why Is Conservation Of Wildlife Important To Youth." Organize those thoughts and put them down on paper. Submit the paper to your teacher or principal and they will send it in to the Richmond office to be judged.

Remember there are 17 prizes in each of the eight competing grades for a total of $1800.00 and some lucky senior will get a $400.00 college conservation scholarship.

Don't put it off, now—the deadline is February 28th, which doesn't leave much time. Next spring 137 Virginia students will be receiving this money. One of them could be you!

## BIRD FEEDING STATION

Winter is the best time to get interested in attracting birds to your yard. Some kids have contests to see who can get the most different kinds of birds to his or her feeding station.

Under ordinary conditions birds do all right for themselves by finding natural foods, but during winter when weather conditions get bad they have a difficult time. Many thousands of birds starve to death because of their inability to find food; others freeze to death as a result of weakness.

In order to have a successful feeding station, you must provide three basic things for the birds: FOOD, WATER, and SHELTER.

Food is probably the easiest to get. Most people use cracked corn or corn mixed with sunflower seeds. This food will attract sparrows, cardinals, chickadees, titmice, nuthatches and woodpeckers. A little bit of beef suet hung out will be a choice delight for most of the birds, particularly the woodpeckers.

Water is an essential in winter as well as in the summer. If you are not fortunate enough to have a creek flowing through your backyard, then a simple bird bath will do the trick.

Perhaps one of the most important and least observed is the third requirement for a successful feeding station, shelter. This is the bushes and shrubs that protect the birds as they come and go from the feeders. Without shelter, the birds hesitate to expose themselves to their enemies.

Commission Photo by Harrison

Vicki Coon, 8½, (left) and Nancy Totz, 7½, put cracked corn into a neighbor's feeding station in Roanoke.

Christmas time is a good time to give the birds a special treat. Get your family interested in decorating a bird Christmas tree. Pick out a tree like the one that you have selected for your home or use the same one when you have taken it down after the holidays. Decorate the bird Christmas tree with popcorn balls, suet, slices of oranges, apple halves, cups of peanut butter, ears of corn and anything else that might interest your feathered friends.

Don't forget the Christmas bird census. Contact your local bird club and join the census. See what birds are in your vicinity.

## A PRESENT FOR DAD

Bought your dad a Christmas present yet? Are you having trouble thinking of something he would really like to have? How about a good book on the outdoors? Something on hunting or fishing, hunting dogs, adventure stories in the big woods, or a good conservation book would make a fine present. A book is something he will keep all his life and remember that you gave it to him too.

## GOOD BOOKS

The penguin is a funny bird of the far southlands, Antarctica. They are not afraid of humans and are a favorite attraction in the zoo. Patricia Lauber's book, *Penguins on Parade,* tells about the famous parades put on by the penguins at the zoo at Edinburgh, Scotland. She writes about how the zoo gets the birds, where they live, what they eat, how they raise their young, and how they escape their enemies. This book is very accurate and well written for young people. (Coward-McCann), 63 pp., illustrated, $3.00. Ages 10-14.

Every boy and girl that likes the outdoors and enjoys making a hobby of collecting things from the woods should have a copy of *The Golden Book of Nature Crafts.* This fine book tells you how to do many interesting things in the outdoors such as casting animal tracks, taking animal pictures, collecting spider webs, making a window garden, making leaf prints, learning where animals live, collecting butterflies, feeding the birds, building an insect zoo, and many other exciting activities in the field of nature. The book was written by John R. Saunders and beautifully illustrated in full color by Roy Pinney. (Simon and Schuster), 67 pp., illustrated. Ages 6-16.

# COMMISSION BRIEFS

### *Commission's State Fair Exhibit Acclaimed*

From September 19-27 the Commission's wildlife exhibit at the Atlantic Rural Exposition in Richmond (see photos) drew record crowds and wide acclaim. Carrying out the theme "Make a Home for Wildlife," examples of nesting boxes, brush piles and food plantings were used with accompanying live animals. Bobcat kittens and a live beaver were on hand for the first time.

### *Scholarship Added to Wildlife Essay Contest Prizes*

Additional money has been granted by both the Virginia Division of the Izaak Walton League and the Virginia Game Commission to reinstate the $400 scholarship as top prize for a 12th grade student in the current 12th Annual Wildlife Essay Contest. This action brings the total prize money to $1800 and should increase interest, especially among high school seniors.

### *Second Iranian Pheasant Release Made*

On October 4-5, Commission personnel made the second experimental release of 250 Iranian blackneck pheasants, in northern Halifax County 20 miles north of Halifax near the Staunton River in south-central Virginia. This release followed by a week the first release of these birds in Charles City County. The Iranian bird, from country similar to that found in eastern Virginia, is not legal game.

Commission Photos by Kesteloo

Scenes from the Commission's exhibit at the Atlantic Rural Exposition in Richmond September 19-27.

## *Commission Personalities*

### J. E. B. Stuart District Supervisor

JOSEPH WHEELER FRANCIS, supervising game warden in the J. E. B. Stuart District, joined the Virginia Commission of Game and Inland Fisheries January 5, 1935, as the Patrick County game warden. Born on a farm in Patrick County on April 2, 1905, Joe has lived in that county all his life and has resided in the town of Stuart for the past 30 years. In 1927 he married the former Pearl Martin, of Stuart, who is now secretary to the principal at Patrick Springs School. The Francis' have one son, Joe Terry, who is in his third year at Appalachian State College at Boone, N. C.

A graduate of Patrick County High School, Mr. Francis served the town of Stuart as chief of police for eight years before receiving his appointment as game warden. On January 1, 1950, he was promoted to game warden supervisor to fill the vacancy made by the promotion of M. Wheeler Kesterson to the newly created position of chief of the law enforcement division. He now has responsibility for all game, fish and dog law enforcement in the south-central Virginia counties of Amherst, Bedford, Botetourt, Campbell, Carroll, Craig, Floyd, Franklin, Patrick, Pittsylvania, and cities of Roanoke and Danville, and for game and fish law enforcement only in Halifax, Henry, Montgomery and Roanoke Counties.

The J. E. B. Stuart supervisor feels that his ability to contact all of his 20 game wardens and two game patrolmen (formerly conservation officers) by radio has helped greatly in the efficient patrolling of such popular areas as Philpott Lake, Buggs Island Lake, the Dan River, the Smith River and the popular deer hunting areas in Craig and Botetourt Counties. He maintains that there has been a big improvement in the deer hunting and trout fishing in his district during the past 30 years, noting that eight counties that never had deer prior to the Commission restocking program now are popular deer hunting areas. His biggest law enforcement headaches are directly attributable to this fact; the spotlighting of deer and pre-season fishing for trout keep his wardens busy apprehending violators. The supervisor would like to see more counties take over the dog law enforcement, feeling that this action would make his work "a whole lot easier."

He is a member of the Stuart Methodist Church and is a charter member of the Stuart Lions Club.

## Virginia Wildlife Federation Holds Annual Meeting

On October 11-12, the Virginia Wildlife Federation held its annual meeting in Winchester. Besides the election of officers, several lively discussions resulted in a series of important resolutions being passed. Among these were the following:

"Just a little precaution I take every hunting season."

1. Recommend the revoking of outside date laws restricting the setting of seasons by the Commission.
2. Recommend a 30-day bow hunting season.
3. Recommend the inclusion of bear in the bow hunting season.
4. Recommend the inclusion of bear for still hunters during the deer season west of the Blue Ridge.
5. Recommend the adoption of visible type of license.
6. Recommend that the Commission liberalize deer hunting regulations consistent with the supply.

Officers upon whom responsibility for the backing of these actions fall include Glenn R. Frum, president; Ross E. Garletts and R. S. Bernard, vice presidents; L. R. Gardner, treasurer; Dave R. Arrington, corresponding secretary and Bill Newsome, executive secretary.

## Virginia Division of the Izaak Walton League Meets

At Natural Bridge on October 4-5, the Virginia Division of the Izaak Walton League held its annual convention for the purpose of reviewing state and national conservation problems and the election of officers for the coming year. A committee was appointed to study a proposal requiring the licensing of persons for salt water fishing and a resolution was passed which encouraged local IWLA chapters to work with the county supervisors in having a dog warden appointed. The slate of new officers includes C. R. Hilliard, of Arlington, president, Robert Sinclair, Radford, 1st vice president, David Martin, Gretna, 2nd vice president, Ernest Foldi, Alexandria, secretary, and Burdge Caton, Suffolk, treasurer.

## Near Miss on Blue Marlin

The blue marlin has never been caught in Virginia waters, but on September 18 Mrs. Ross H. Walker of Richmond landed what certainly looked like one. So sure was the party of its identity that Al Pflueger was called in to pass judgment. It turned out that the dorsal fin was deformed and thus the confusion. It was, instead, a white marlin. The specimen was of such interest, however, that the Oceanic Museum in Miami desired photos of the catch. A blue marlin has yet to be taken off Virginia's shores.

Commission Photo by Kesteloo
Mrs. Walker with deformed white marlin.

## More Forest Fires in 1958

Lightning and dry weather mean fire and this year the incidence of forest fires has soared. In national forests the number of fires reported so far this year totals 8,232 compared with only 5,652 for the same period in 1957. The U. S. Forest Service warns that the number of fires and the acreage destroyed through burning can be expected to continue increasing. The danger of man-made fires, still the most important cause of forest fires, increases as hunters, picnickers and sightseers take to the woods.

## Patrick Henry District Wardens Meet

On October 15, Patrick Henry District wardens met in the Commission's hearing room in Richmond for their annual pre-hunting season meeting. Under the direction of their supervisor, I. H. Vassar, new game laws were discussed, check station materials gathered and assignments for special patrols made. Chester Phelps, Commission executive director, spoke briefly of the means and need for cooperation and coordination among the field men. Webb Midyette, law enforcement chief, reminded the men of their responsibilities to the people of their areas and the great role that personality and good public relations plays in achieving results in their work.

# LETTERS AND COMMENTS

Letters of general interest are welcomed. They should be signed, but initials will be used on request.

### Bobwhite Recitation for a Girl

I AM enclosing a copy of a poem on the bobwhite quail written by my father over 40 years ago when I was a boy in Kentucky. It is unique in that it was written for a recitation by a little girl—who, theoretically, cannot whistle. The recitation required that at certain points the little girl's father or her older brother whistle a "bobwhite" loud and clear:

THE BOB WHITE

By Joseph H. Hieronymus

There is a pretty, brownish bird that lives about our farms,
He has a little "top-knot" head, and none he ever harms.
He feeds upon the seeds of weeds from early morn 'til late,
He catches bugs and ants and worms and calls them to his mate:
"Bob-Bob-White."
The mother bird within the grass her little, white eggs lays.
Upon a nest of finest straw she sets for days and days
Until the tiny, wee ones chirp beneath her speckled wings;
And then she feeds them day by day and often to them sings:
"Wheer—e-chee, Wheer—e-chee, Wheer—e-chee."
The father bird, he lingers near and often lends his care;
And helps to guard with faithful eye the little birdies dear.
Until at last the brood has grown—about the last of Fall,
When hunter comes with dog and gun to listen for their call:
"Bob-Bob-White. Bob-Bob-White."
The pointer soon will find their place and when they rise to fly,
"Bang, bang," the gun! And down they fall, to flutter and to die.
Those that are left, they still pursue to try to get them all.
But hunter, dog, and gun all fail, and still we hear the call:
"Bob-Bob-White." (Faintly) "Bob-Bob-White. Bob-Bob-White."

My wife and I thoroughly enjoy VIRGINIA WILDLIFE. Congratulations on the fine makeup and just-right mixture of entertainment and information.

*George H. Hieronymus*
Falls Church, Virginia

### Virginia Wildlife Gets Around

A wonderful magazine worth many times the price.

*S. L. Goodrich*
Newport News, Virginia

I HAVE seen your magazine in many homes and schools and enjoy it very much.

*Jimmy Spady*
Battery Park, Virginia

I HAVE recently been given Volume XIX No. 6 of your VIRGINIA WILDLIFE for month of June 1958. I certainly think you have something that should interest anyone who likes the outdoors. The magazine gives them the information they should have to improve it.

*J. A. Peterfish*
Mullens, West Virginia

## Wildlife Questions and Answers

***Ques.:* I killed a buck deer last year that was about one-half white. Also, it had strange hoofs and the ankle joints were swollen. Would this be an albino deer? Could he have been the result of a deer-goat cross?**

***Ans.:*** Mother Nature plays tricks occasionally on all of her plants and animals. Evidently, your deer was a partial albino; a true albino has pink eyes and

Photo by Willis D. Clements

Commission Photo by Kesteloo

**Two examples of a Virginia "doat."**

a pure white coat of hair. Every county in Virginia has a few of these deer. No known cross between goats and deer exists in Virginia, but the physical differences were due probably to some mix-up in the hereditary background of the particular deer.

I HAVE been engaged in wildlife management for several years and have read many publications from various states, but I must give your organization credit for having the most interesting and factual articles I have ever seen between the covers of any magazine dealing with this subject.

*Harold Armstrong*
Tennessee Game and Fish Commission
Sharps Chapel, Tennessee

YOUR VIRGINIA WILDLIFE magazine is so interesting. It has beautiful photography and fine articles.

*Mrs. Anna Mary McGirk*
Baltimore, Maryland

I WOULD like to express my thanks for being able to receive such a swell magazine about my home state and thereby keeping me informed about a part of the country which I haven't seen in four years. Many things have changed but I feel as if I've kept up with wildlife and conservation by the best means as your magazine covers all programs and projects that are going on in Virginia.

*Dan L. Hawkins, A/1c, USAF*
3911th Supply Squadron
New York, New York

UNDOUBTEDLY finest publication of its kind I have ever seen. Would not be without it and I find many soldiers here at "Y" reading my copy when I have finished.

*Eugene G. Eddy, Executive Secretary*
Armed Services—Y.M.C.A.
Fort Monroe, Virginia

### More Praise for Bierly

I WANT to compliment you on an exceptionally fine magazine and to especially praise the paintings by Edward J. Bierly, whom I believe is the finest wildlife artist this country has ever known and will eventually be recognized as such.

*Georg H. Sigel*
Alexandria, Virginia

### Magazine Used by Scouts

I WISH to compliment your VIRGINIA WILDLIFE magazine staff on the fine job and very interesting articles I have read in this past year's issues. In fact, I advised various Virginia scouting units to secure these for the boys studying and practicing outdoor camping, fishing and other scout activities about the Shenandoah Valley area. Some of my fishing friends in New York State have also told me they intend to send in to get their own copies each month too.

*E. H. Allen*
Broadway, Virginia

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